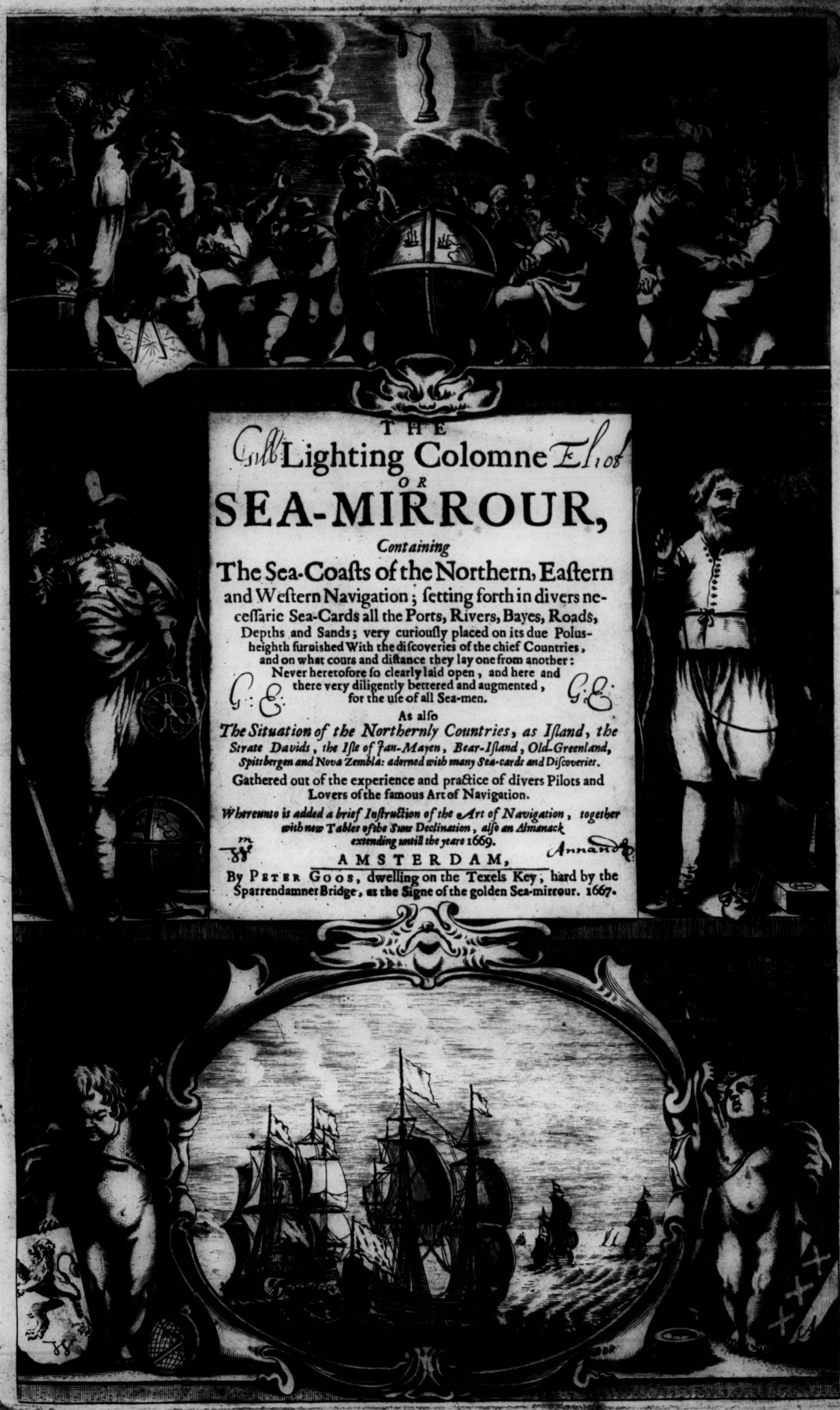


THE

Gilt Lighting Colomne Fl 108

OR

SEA-MIRROUR,

Containing

The Sea-Coasts of the Northern, Eastern and Western Navigation; setting forth in divers necessarie Sea-Cards all the Ports, Rivers, Bayes, Roads, Depths and Sands; very curiously placed on its due Polus-heighth furnished With the discoveries of the chief Countries, and on what cours and distance they lay one from another: Never heretofore so clearly laid open, and here and there very diligently bettered and augmented, for the use of all Sea-men.

G: E: G: E:

As also

The Situation of the Northernly Countries, as Island, the Strate Davids, the Isle of Jan-Mayen, Bear-Island, Old-Greenland, Spitsbergen and Nova Zembla: adorned with many Sea-cards and Discoveries.

Gathered out of the experience and practice of divers Pilots and Lovers of the famous Art of Navigation.

Whereunto is added a brief Instruction of the Art of Navigation, together with new Tables of the Suns Declination, also an Almanack extending untill the yeare 1669.

m 83

Annando

AMSTERDAM,

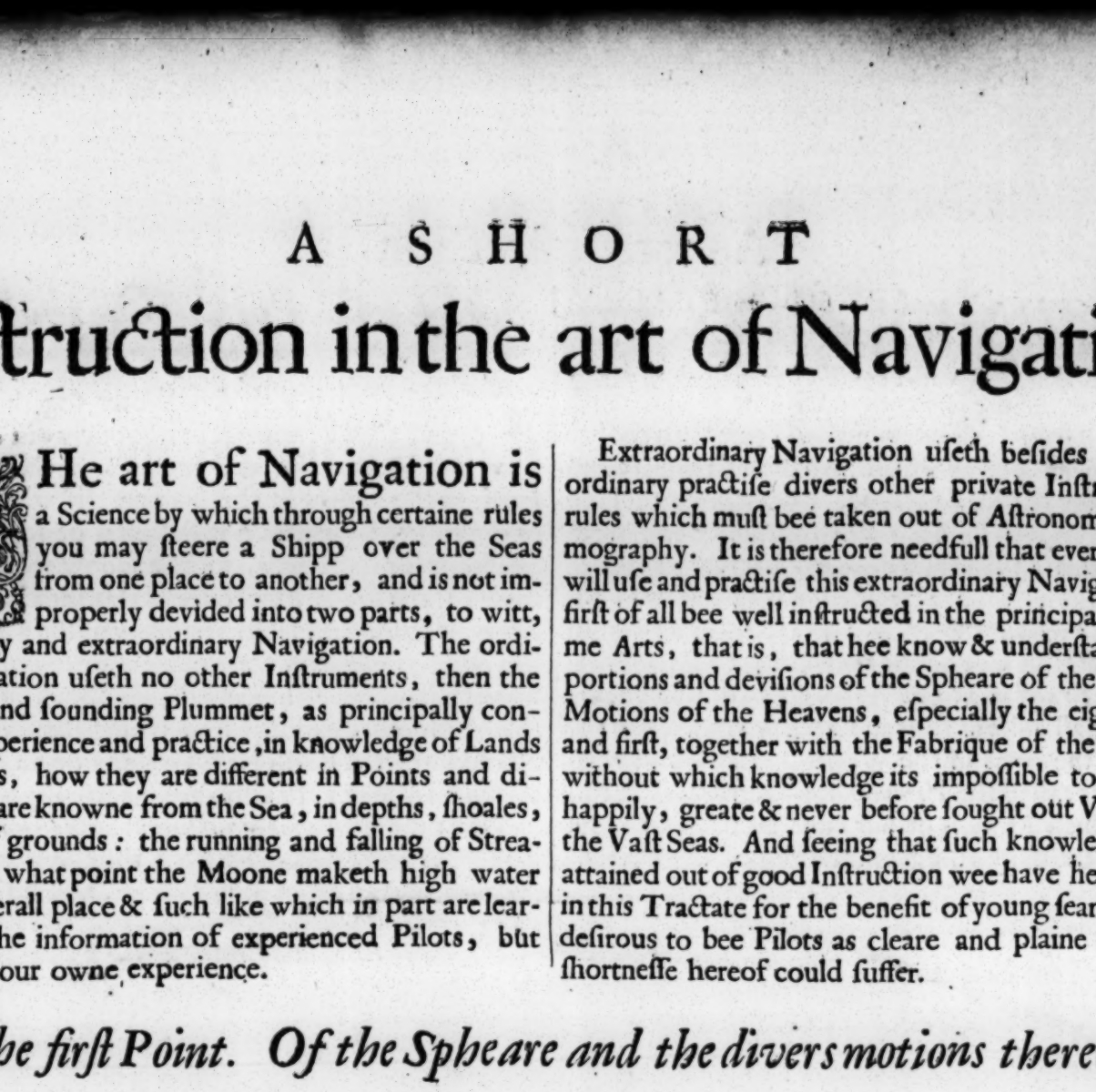
By Peter Goos, dwelling on the Texels Key, hard by the Sparrendamner Bridge, at the Signe of the golden Sea-mirrour. 1667.

A SHORT
Instruction in the art of Navigation.

THe art of Navigation is a Science by which through certaine rules you may ſteere a Shipp over the Seas from one place to another, and is not improperly devided into two parts, to witt, into ordinary and extraordinary Navigation. The ordinary Navigation uſeth no other Inſtruments, then the Compaſſe and ſounding Plummet, as principally conſiſting in experience and practice, in knowledge of Lands and Corners, how they are different in Points and diſtances and are knowne from the Sea, in depths, ſhoales, qualityes of grounds: the running and falling of Streames; upon what point the Moone maketh high water in every ſeverall place & ſuch like which in part are learned from the information of experienced Pilots, but moſt out of our owne experience.

Extraordinary Navigation uſeth beſides the foreſayd ordinary practiſe divers other private Inſtruments and rules which muſt bee taken out of Aſtronomy and Coſmography. It is therefore needfull that every Pilot who will uſe and practiſe this extraordinary Navigation, muſt firſt of all bee well inſtructed in the principales of the ſame Arts, that is, that hee know & underſtand the proportions and deviſions of the Spheare of the World, the Motions of the Heavens, eſpecially the eighth, fourth and firſt, together with the Fabrique of the Inſtruments, without which knowledge its impoſſible to accompliſh happily, greate & never before ſought out Voyages over the Vaſt Seas. And ſeeing that ſuch knowledge may bee attained out of good Inſtruction wee have here ſet downe in this Tractate for the benefit of young ſeamen who are deſirous to bee Pilots as cleare and plaine rules as the ſhortneſſe hereof could ſuffer.

The firſt Point. Of the Spheare and the divers motions thereof.



A Spheare properly is called a Ball, wholly entire and round, whoſe ſuperfices and outſide is every where alike diſtant from its center. By that World *Sphæra Mundi*, or Spheare of the World, wee underſtand commonly the whole Ball of the Heavens with all that is therein contained; & it is devided into two parts Elementary & Celeſtiall, the Elementary part hath againe 4 parts: the Firſt is the Earth, which with the water as the ſecond maketh a compleate Ball upon which wee dwell. The Third is the Aire encompaſſing the Earth and the fourth is the fire, which according to the opinion of Philoſophers containeth the ſpace which is betweene the Aire and the Spheare of the Moone. From theſe Elements (which are the beginning of all things) which are alwayes ſubject to changes, together with the Warmth of the Heavens ariſe and periſh by a continuall change and alteration of the one into the other, all things which wee ſee and find upon Earth.

The Celeſtiall part (containing within in its Hollowneſſe the Elementaryes) is pure ſhining, ſeperate and voyd of all changes, is devided into 8 Spheares or round Hollow Balles, which are called Heavens, whereof the greateſt alwayes containeth one the other in manner of a Ball, the ſeaven loweſt have but every one

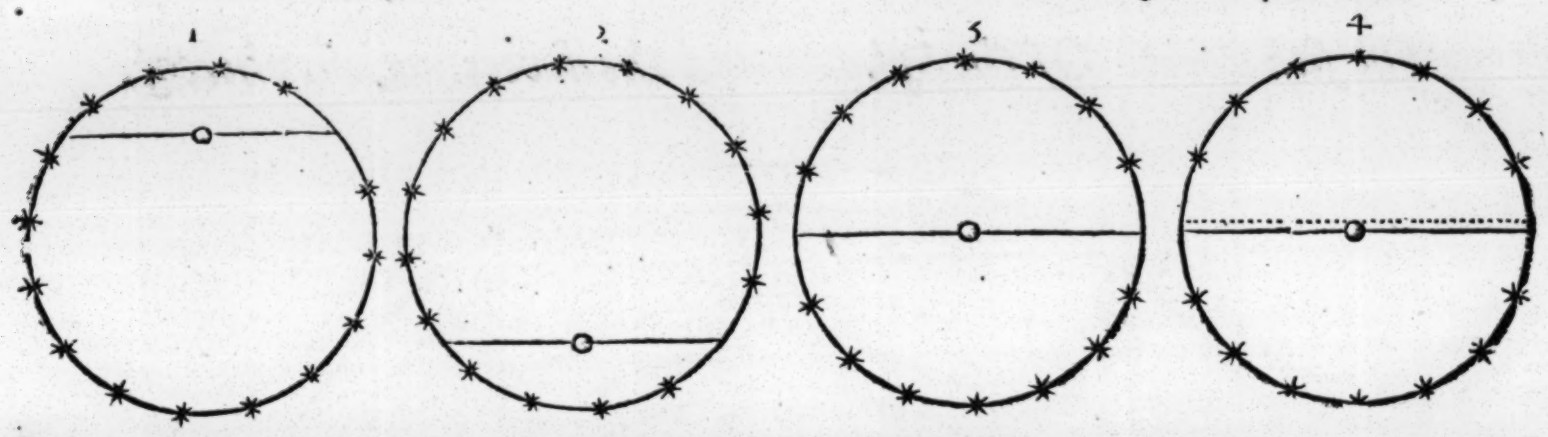
Starre or Plannet, whereof the firſt (next the Earth) is the Heaven of the Moone, the ſecond of Mercury, the third of Venus, the fourth of the Sunne, the fifth of Mars, the ſixth of Jupiter, the ſeaventh of Saturne, and the eigth of all the fixed ſtarrs. The Number of theſe Heavens are knowne by their Courſes which wee ſee in them round about the Poles of the Zodiaque. The Moone runneth through her Heaven by her owne naturall courſe from Weſt to Eaſt in 27 dayes, 8 howres, Mercury Venus & the Sunne theirs in a yeare. Mars his in two yeares, Jupiter his in 12 and Saturne in 30 yeares. The eighth heaven perfects its owne courſe, according to the affirmation of *Tycho Brahé* in 25400 yeares; Theſe Heavens are turned about all alike in four and twenty houwres on the Poles about the Axes of the World by the Ninth Heaven, which is called the *Primum Mobile*, that is the firſt Mover by which Motion in our ſight is cauſed Day and Night, and the daily riſing and falling of the heavenly lights.

The ſecond Point. Of the Roundneſſe of the Earth.

THat the Earth with the Water together maketh a round Globe, appeareth not onely out of experience very clearely, but alſo out part of the Shaddow of Earth in the Eclips of the Moone. In whatſoever part of the Heaven the Moon is Eclipſed or touched by the Shaddow of the Earth, that Shaddow ſeemeth alwayes round. If the Earth were foure ſquare, three cornerd, or of any other forme, then the Shaddow of the Moone ſhould bee alſo foure ſquare, three cornerd or ſome other forme: For of what proportion any body is, ſuch alſo muſt bee the Shaddow thereof. And ſeeing therefore that the Shaddow of the Earth is alwayes and on all ſides round, the Earth it ſelfe muſt alſoo bee neceſſailly round.

That the Heaven is round wee marke from the Eye, but is moſt clearely perceived from the Circular motions of the heavenly lights, as of the Sunne, Moone and Starres.

The third Point that the Earth is in the middle of the World.



THat the Earth ſtandeth in the middle of the World, may clearely bee underſtood by what is hereafter ſpoken: for if ſo bee that the Globe of the Earth ſtood not in the middle of the World, but that the heaven was nearer it on one ſide, it would come to paſſe, that the ſtarres in their daily courſes ſhould bee nearer on one ſide of the Earth then on the other, and by that meanes ſhould appeare to our ſight to bee greater on one ſide of the Earth then on the other: likewiſe if that part of the heaven next to the Earth were above us, wee ſhould then ſee leſſe then halfe of the heavē according to inſtruction of the firſt figure: & on the contrary whē that part of the heaven fartheſt from us were above us, wee ſhould then ſee more then halfe of the Heaven according to the Inſtruction of the ſecond Figure. But ſtanding upon the flatt ſide of the Globe wee ſee the Starres as well on the one ſide as on the other (in whatſoever part of the Heaven that it is) alwayes of one greateneſſe, and it is found by experience, that wee alwayes ſee the one half of the Heaven, and the other halfe is hidden from our Eyes, from thence it appeares plainly according to the expreſſion in the third Figure. That the Earth ſtands in the middle of the World: From thence is likewiſe to bee marked that the Globe of the Earth is no more to bee likened by the Heavens then a point without thickneſſe, for if the Earth had any thickneſſe in reſpect of Heaven, wee ſhould (ſtanding upon the Earth) by that reaſon not ſee halfe of the Heaven according to the Demonſtration of the 4. Figure.

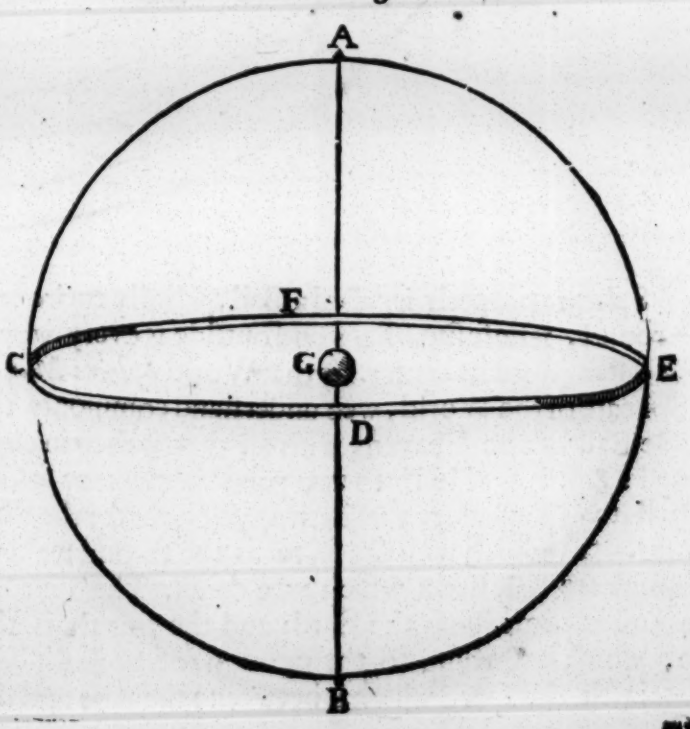
The fourt Point. Of the greateneſſe of the Earth.

ALthough the Globe of the Earth (as is ſayd) in reſpect of the extraordinary wideneſſe of the Heaven is no more then a point, nevertheleſſe in reſpect of its ſelfe it is a greate body having in its Compaſſe 5400 dutch Miles. And that is knowne by this meanes. If you devide the whole Circle of the Compaſſe of the Earth into 360 parts or degrees, and wee find as well by Navigation as by meaſuring of Land that ſuch a Degree or part containeth fiftheene ſuch Dutch Miles, 360 ſuch part beeing multiplyed by fiftheene make out 5400 Dutch Miles.

The fifth Point. Of the Axis and Poles or Axepoints of the World.

IN the Globe of the World is imagined to bee a Line going from one point on the ſide of the Spheare (as a Diameter through the Center) to another Point right againſt it on the other ſide. That Line is called the Axis and the outermoſt-ends thereof, or the foreſayd points, the Poles or Axepoints of the World, the one towards the North, and is called the Northerne Pole, and the other towards the South, called the Southerne Pole. Upon which Poles it is imagined, that the Spheare is upon its Axeltree daily turned.

The Demonſtration.



The

THe line A G B in this Figure going from the Point A through the Center G as a Diameter to the point B right against it sheweth the Axel of the World and the Points A and B the Poles. A to the North the Northerne and B to the South the Southerne Poles.

The Sixth Point. Of the Æquinoctiall Line.

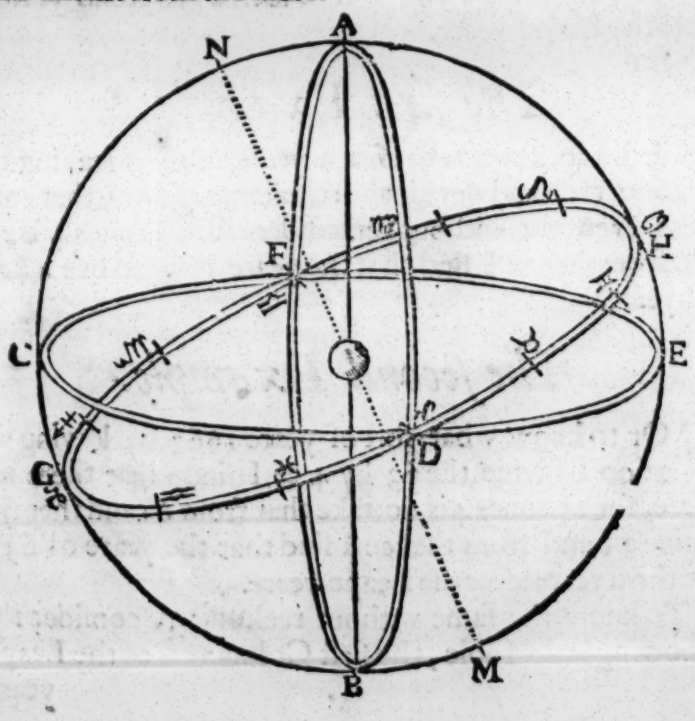
IN the middest of the Heavens every where equally distant from both the Poles, is imagined a greate Circle, dividing the whole Spheare into two equall parts which is called the Æquinoctiall, because when the Sonne commeth to or under that Circle which commeth to passe the 21 of March, and the 23 of September, the day and night are in all places of the Earth of an equall length. The knowledge of this Circle is proffitable above all things in Navigation, to know thereby houw farr wee goe either to the Northwards or Southwards upon Earth; thereby alsoo is reckoned the time and hower of the day, the Declination of the Son and Starrs, and more other proffitable things.

Demonstration.

IN the foregoing Figure A and B the Poles of the world C D E F is the Equinoctiall Line in the middest of the Heaven equally distant from both the Poles A and B dividing the whole Spheare A C B E into two equall parts as C A E the Northerne and C B E the Southerne part from hence is to bee noted: Seeing that the whole Compasse of the Heavens is divided into 360 degrees that the Poles stand from one another 180 degrees and betweene the Poles and the Æquinoctiall remaineth every where on both sides 90 degrees. This Line is marked in the Seacards with a red Line from east to west through the beginning of the degrees according as they are reckoned as well towards the North as to the South.

The Seaventh Point. Of the Ecliptique Line.

THe Ecliptique Line lyeth away over the Equinoctiall deviding it in two points right over against one another in two equall parts, and is also devided by it in two equall parts, the one lyeth betweene the Equinoctiall, and the North-Pole, the other betweene the Equinoctiall and the South-Pole. Its greatest Declination on both sides of the Equinoctiall towards both the Poles is 23 degrees 31½ minutes and is devided into twelve equall parts, and to each of them a severall signe applyed. The Sonn goeth alongst this Circle without ever going out of it & runneth through it with its owne naturall course every yeare once, and even as the Poles of the World stand every where alike distant from the Equinoctiall even soo hath the Ecliptique alsoo its two Poles every where alike distant from the same.



Demonstration.

IN this Figure as before is sayd A B are the Poles of the World C D E F the Equinoctiall G D H F the Ecliptique Line cutting and dividing the Equinoctiall, and its selfe also into two equall parts, in the Points D and F which wee call the Equinoctiall, the one at D the Spring Equinoctiall, the other at F the Autumne Equinoctiall. The one halfe D H F the northern part lyeth betweene the Equinoctiall D E F and A the North-Pole at most declined towards F H 23 degrees and 31½ minutes: The other halfe F G D the Southern part lyeth betweene the Equinoctiall F C D and the South-Pole B likewise at most declined as C G 23 degrees 31½ minutes. The North-Part is devided into six signes, which wee call the Northerly beginning at D with the Kimbug signes towards the north. *Aries*, *Taurus*, *Gemini*, unto H the point of the fartheest declination. From thence with the descending signes of the North, *Cancer*, *Leo*, *Virgo*, to the Equinoctiall Line in F the Autumne Equinoctiall the southern-part is also divided into six signes which wee call the Southerly beginning at F with the discending signes towards the South *Libra*, *Virgo*, *Saggitarius* untill G the Point of the fartheest Declination towards the south from thence further with klimbing signes towards the North *Capricornus*, *Aquarius*, *Pisces* as farr, as till you come to the Equinoctiall line in the Spring Equinoctiall D. The Sonn runneth through the three first Northerly signes from the 21 of March new style to the 21 of June new styl the other from the 21 of June to the 23 of September. The first 3 Southerly signes from the 23 of September to the 23 of December and the other from the 23 December till the 21. of March againe. The Poles of the Ecliptique are M and N both of them standing every where alike distant from the Ecliptique G H and so farre from the Poles of the World A and B as the Ecliptique is fartheest declining from the Equinoctiall at H E and C G.

The eight Point. Of the Coluri.

THe Coluri are two Circles, going crossways through both the Poles of the World, dividing each other into two parts in the Poles, & together with them the whole Globe Equinoctiall Zodiac or Ecliptique and all the Paralels in 4 equall parts, the one going through the Points of the Equinoctialls is called the Colurus of the Equinoctialls, the other through the points of the Solstices the Colurus of the Solstices. The Sonne moving these Circles (through its yearely course in the Zodiack, devideth the yeare into foure parts) as the Spring, Summer, Autum and Winter.

Demonstration.

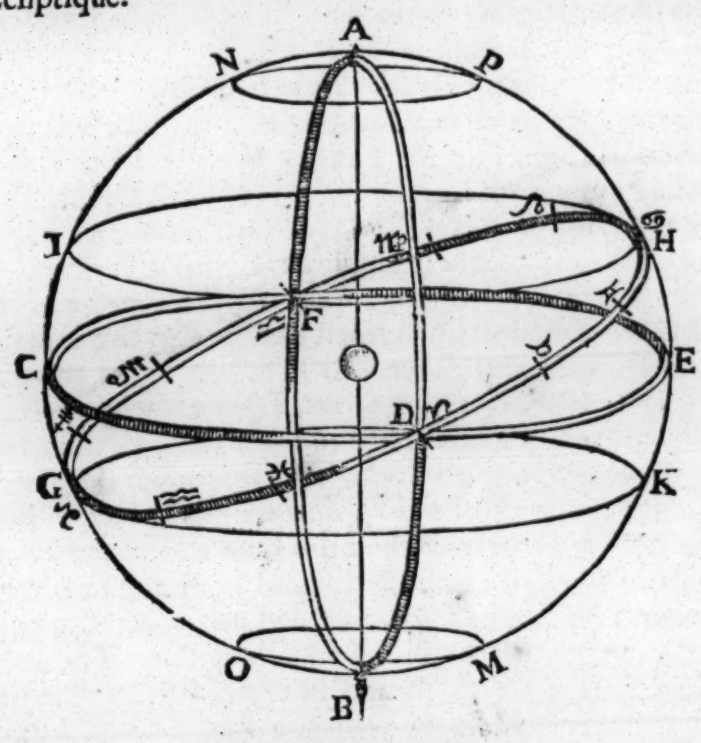
IN the foregoing Figure A F B D is the Colurus of the Equinoctialls, going trough D and F the points of the Equinoctiall in the beginnings of *Aries* & *Libra*, & through the Poles A & B A C G B. M E H the Colurus of the Solstices in the beginnings of *Cancer* & *Capricornus* where the Ecliptique is fartheest distant from the Equinoctial line through the Poles of the World A and B and through the Poles of the Zodiack M and N cutting one another through crossewayes with right corners in the Poles A and B & deviding the Zodiaque or Ecliptique in 4 parts, as D H. H F. F G. and G D the first of which the Sonne wanders through in the Spring, the second in the Summer the third in the Autume, and the fourth in the Winter.

These foresayd Circles of the Spheare are all greate Circles that is compassing the Spheare at the wideest deviding the same into two equal parts; there follow now 4 small circles which devide the Spheare into unequall parts:

The ninth Point. Concerning the Tropickes and the Artique and Antartique Circles.

THe Tropiques are two Circles, the one northwards and the other southwards from the Equinoctiall, and alike wide with the same which through turning about of the Spheare from the points of the Ecliptique are fartheſt diſtant from the Equinoctiall, and are placed the one to the North and is called the Tropique of Cancer, and the other to the South and is called the Tropique of Capricornus.

Circulus Articus the Northerne Circle and Circulus Antarticus the Southerne Circkle are reckoned through the running about off the Spheare from the Poles off the Ecliptique.

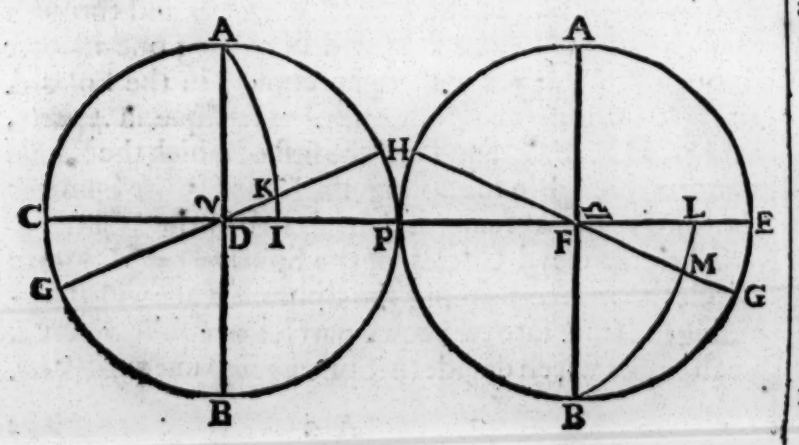


Demonſtration.

IN this Figure H I is the Tropicke of Cancer which through the turning about of the Spheare is written from the point H, the beginning of Cancer is alſo called becauſe that the Sonne comming to that point, fartheſt from the Equinoctiall towards the North, turneth then againe through the Crabfiſh, towards the Equinoctiall G K is the Tropique of *Capricornus*, ſo cauſed through the running about of the Spheare from the point G the beginning of Capricornus or the Goate, and is ſo called becauſe the Sunne comming to that point in the fartheſt from the Equinoctiall towards the South, then turneth againe through the Goate towards the Equinoctiall, N P is the Artique Circle and M O the Antartique Circle they are ſo called through the running about of the Spheare from the Poles of the Zodiaque N and M. Theſe are equally diſtant from the Poles of the World A and B as the Tropique are from the Equinoctiall Line, to witt 23 degrees and 31½ minutes.

The tenth Point. Of the Suns Declination.

THe Suns Declination is its diſtance from the Equinoctiall Line, and that is two fold towards the North and South.



Demonſtration.

THe Suns Declination is cauſed through his courſe alongſt the Ecliptique Line thus. Let A bee the Northerne & B the Southerne Pole of the World C P E the Equinoctial G H G the Ecliptique Line. The Sunne comming in the beginning of Aries on the 21 of March to D commeth alſo in the Equinoctiall Line, hath beſides no Declination neither Northwards nor Southwards, but going forwards alongſt the Ecliptique from D to H and comming to K in the beginning of Taurus, it ſhall bee diſtant & declined from the Equinoctiall Line towards the North from I to K 11 degrees and 30 minutes. Going forwards to H is then at moſt declined from P to H 23 degrees 31½ minutes. From thence following its courſe from H to F commeth in the beginning of Libra againe to the Line without declination. Going forwards from F towards G untill M in the beginning of Sagitarius, it ſhall bee diſtant or declined from the Line F E towards the South from L to M 20 degrees 13 minutes. Comming to G it is then at its fartheſt declination from E to G towards the South, from thence it runneth againe to D to the Equinoctiall Line, perfecting its courſe in a yeare.

The Eleaventh Point. How to finde the Sunnes Declination upon every day in the yeare.

THe yeare of the Sunne (that is the time wherein the Sunne goeth out of a certaine point in the Ecliptique, & turneth againe into the ſame) and is not juſt 365 dayes, but about 5 houres and 49 minutes (that is little leſſe then 6 howers more, wherefore it is that wee alwayes adde after three yeares to the South 4 times 6 howers that is a day to the Month February thereby to count the yeare or Revolation of the Sunne into equall dayes, therefore every ſuch fourth yeare is called the *Leap-yeare*. If therefore you will then ſett the Sunnes Declination by day tables it is needfull to make foure ſundry tables of foure ſuch following yeares. The foreſayd difference of foure Revolutions of the Sunne come not equally alike with ſuch foure yeares, being with length of time ſo much difference in the Declination that it is needfull to renew ſuch tables every twenty yeares.

Now to find the Declination of the Sunne out of ſuch Tables upon every day of the yeare, it is needfull to know two things, the firſt in what yeare you are, either the Leap-yeare, or in the firſt ſecond or third yeare after. The ſecond, when you know the yeare which of the Tables you muſt uſe hereto.

For the firſt, devide the yeare of our Lord 1600 by 4, if the deviſion commeth even out without remainders, ſuch a yeare is then a Leape-yeare of 366 dayes, but if out of the diviſion any number remaineth, ſuch remainders ſhew you how much that ſuch a propoſed yeare is after the Leape-yeare.

The firſt Example.

I deſire to know what for a yeare 1644 is leaving the 1600, take and devide the remaining 44 by 4, that commeth even out without remainders for 11 times 4 is 44, and from thence I find that the yeare 1644 to bee a Leape-yeare.

The ſecond Example.

FOr to know what ſort of yeare 1663 is, leaving the 1600 I divide the 63 by 4 & I finde that there reſt three, for 15, times 4 is 60, take that from 63 and there remaine 3, and from thence I find that the yeare of 63 is the third yeare after the Leape-yeare.

To know the ſame without reckoning, conſider this following little Table, the firſt Columne is of the Leape-

yeares

yeares the second, third, and fourth Columne are three yeares after the Leape yeares.

Leape yeare.	1 *yeare.*	2 *yeare.*	3 *yeare*
1660	1661	1662	1663
1664	1665	1666	1667
1668	1669	1670	1671
1672	1673	1674	1675

The second for to know which Table you must use to every yeare that standeth demonstrated above each of the following Tables.

The first Example.

IN the second yeare following the Leape yeare upon the 20 of May, I desire to know the Sonnes Declination: I seeke in the Tables the Month of May, in the second yeare and there under in the first Collumne of the Figures the twentieth day, I find in the second Collumne 20,8. That is 20 degrees and 8 minutes, to bee the Sonnes Declination. And seing that it is betweene the 20 of March, and the 23 of September (that the Sonne is by northwards of the Line) so comes it to passe that the Declination is Northerly.

The second Example.

UPon the 12 of February in the Leape yeare, I desire to know the Sonnes Declination, seeke therefore in the Table of Leape yeares the Month of February, and count in the first Collumne to the 12 day, and you find there by it 13 degrees and 42 minutes for the Delination of the Sunne on that day; seeing that it is betweene the 23 of September and 20 of March, that the Sunne goeth by south the Line. The Declination is then Southerly.

Now follow the Tables of the Sunnes Declination reckoned properly, upon the length of the earth or Meridian of Englands Lands-End, becaus that this length is used most by our Netherland seamen as well in running, upon the Channell of the Sea, as alongst the Coasts of France, Portugal and Spaine.

N O T A.

LOok how many degrees and minutes the Line is raised above the Horizon, just so many degrees and minutes are there between the point right over your head, called the Zenith and the Pole, and thence it followeth, that as many degrees and minutes as there be betweene the Zenith and the Line, just as many are there from the Horizon to the Pole; that is to say, so many degrees is the Pole elevated, therefore when we say we are in such a beight, we understand that we are so many degrees on the north or southside of the Line. This rule and instruction is universall and common through out the whole World both in the north and southside of the Line.

An Admonition to the Reader.

IF a man would observe the height of the Sun, it is necessary that he know how many foot he stands above the water, for the higher a man stand the farther hee is from the Horizon, becaus that from the eye to the Horizon, is 60 degrees, if wee stand waterpas, as they call it; but if he stand higher then the water as is sayd, it will bee more then 60 degrees to the Horizon; And to mend this fault, I have here placed a table, thereby to know whether wee stand higher then the water or no, and how many minutes differenoe it makes, and also how much neerer the eye the crosse standeth, then adding the minut. to that which the crosse standeth below the Zenith, so shall you mend the fault, that is to say, that you see the crosse so many minutes downward; look on the table following.

Example.

In this height above the earth.	
feet.	minutes.
2	1
4	2
8	3
14	4
20	5
27	6
39	7
53	8
67	9
82	10
100	11
118	12
140	13
163	14
180	15

LEt your eye be above the water, suppose 27 feet, that the crosse may stand 45 degrees from the Zenith (that is, beginning to tell from that end where the eye is) these 27 feet, being sought in the first rancke, or Columne of the Table, and you shall find over against it 6 minutes, so much is the Horizon below, that which they call the waterpas or the sursafe of the water, and so many feet must the crosse be thrust downward, so will it fall out 45 degrees, six minutes, where the crosse ought to be.

Of the vapours and exhalations

which the Sunne, Moon and Stars, as they are nearer the Horizon do seem to draw up more, as indeed and truth they are.

EXperience teacheth, that the lights of heaven, by how much they are nearer the Horizon, by so much doe they seeme to be higher then indeed they are; and by reason of the fumes and damps, which continually arise & as they are nearer the Horizon, so much are they more thick, and rising by little and little, they lessen, and at the least are cleane vanished, and as wee come nearer the Pole, the vapours do more and more increase, and for that cause doe the lights seeme to be higher then they are. Yea it is found about the height of 83 degrees towards the north, that the Sunne seemeth to be 40 minutes higher then in truth it is, this hath that famous Astronomer Ticho Brahe searched out and written in Denmarck, as you may see in this table.

A Table of the rising of the Sunne.

	Degrees.	Minutes.	
When the Sunne is found to be high.	0	34	higher then indeed it is.
	1	26	
	2	20	
	3	15	
	4	13	
	7 it semees	10	
	10	7	
	15	3	
	23	1	
	32		

A Table of the rising of the Starres.

	Degrees.	Minutes.	
When the Stars are of the hight	0	30	higher then indeed they are.
	1	22	
	2	15	
	4 they seeme	11	
	7	8	
	11	5	
	15	3	

The use of this table will we declare by an example and whatsoever is sayd of the rising of the Sunne, the same may bee sayd of the Starres.

Example.

LEt the height of the Sun be measured, and found to bee 7 degrees above the Horizon, and in the table of the Sunne above written, there are 13 minutes which the Sun seemeth to bee higher then it is, therefore substact 13 minutes from the 7 degrees, there will remaine 6 degrees 47 minutes for the true height of the Sun.

But if we take the distance of the Sun from the Zenith according to this example, it would be found to be 83 degrees, and then 13 min. added to the 83 degrees, the product is 83 degr. 13 min. for the true distance of the Sun from the Zenith, then if we take 83 degr. 13 min. from 20 degrees there will remaine 6 degr. 47 min. as before, and so will it be in all the other.

The TABLES, Of the Suns Declination after the New stile, FOR THE LEAP-YEARE.

Januar.			Februar.			March.			April.			May.			June.			July.			Augusst.			Septemb.			October.			Novemb.			Decemb.		
da.	de.	mi.	da.	de.	mi.	da.	de.	mi.	da.	de.	mi.	da.	de.	mi.	da.	de.	mi.	da.	de.	mi.	da.	de.	mi.	da.	de.	mi.	da.	de.	mi.	da.	de.	mi.	da.	de.	mi.
1	23	5	1	17	7	1	7	11	1	4	57	1	15	25	1	22	15	1	23	9	1	17	54	1	8	1	1	3	32	1	14	58	1	22	3
2	23	0	2	16	50	2	6	48	2	5	20	2	15	43	2	22	23	2	23	4	2	17	39	2	7	39	2	3	55	2	15	7	2	22	12
3	22	54	3	16	32	3	6	25	3	5	43	3	16	0	3	22	30	3	22	59	3	17	23	3	7	17	3	4	18	3	15	26	3	22	20
4	22	48	4	16	14	4	6	2	4	6	6	4	16	17	4	22	37	4	22	54	4	17	7	4	7	55	4	4	42	4	15	45	4	22	28
5	22	41	5	15	56	5	5	39	5	6	29	5	16	34	5	22	44	5	22	48	5	16	51	5	6	33	5	5	5	5	16	3	5	22	35
6	22	34	6	15	38	6	5	15	6	6	52	6	16	51	6	22	50	6	22	42	6	16	34	6	6	10	6	5	28	6	16	21	6	22	42
7	22	26	7	15	19	7	4	52	7	7	14	7	17	8	7	22	56	7	22	36	7	16	17	7	5	48	7	5	51	7	16	39	7	22	49
8	22	18	8	15	0	8	4	28	8	7	36	8	17	24	8	23	1	8	22	29	8	16	0	8	5	25	8	6	14	8	16	56	8	22	55
9	22	10	9	14	41	9	4	5	9	7	59	9	17	40	9	23	6	9	22	22	9	15	43	9	5	2	9	6	37	9	17	13	9	23	1
10	22	1	10	14	21	10	3	41	10	8	21	10	17	55	10	23	10	10	22	14	10	15	25	10	4	39	10	7	0	10	17	30	10	23	6
11	21	52	11	14	2	11	3	17	11	8	43	11	18	11	11	23	14	11	22	6	11	15	7	11	4	16	11	7	23	11	17	46	11	23	11
12	21	42	12	13	42	12	2	54	12	9	5	12	18	26	12	23	18	12	21	57	12	14	49	12	3	53	12	7	46	12	18	2	12	23	15
13	21	32	13	13	22	13	2	30	13	9	27	13	18	40	13	23	21	13	21	48	13	14	30	13	3	30	13	8	9	13	18	18	13	23	19
14	21	21	14	13	1	14	2	7	14	9	48	14	18	55	14	23	24	14	21	39	14	14	11	14	3	7	14	8	31	14	18	33	14	23	22
15	21	10	15	12	40	15	1	43	15	10	9	15	19	9	15	23	26	15	21	29	15	13	52	15	2	44	15	8	53	15	18	48	15	23	25
16	20	59	16	12	19	16	1	20	16	10	30	16	19	23	16	23	28	16	21	19	16	13	33	16	2	21	16	9	15	16	19	3	16	23	27
17	20	47	17	11	58	17	0	56	17	10	51	17	19	36	17	23	30	17	21	9	17	13	14	17	1	58	17	9	37	17	19	18	17	23	29
18	20	35	18	11	♓37	18	0	32	18	11	♉12	18	19	49	18	23	31	18	20	59	18	12	55	18	1	34	18	9	59	18	19	32	18	23	30
19	20	♒23	19	11	16	19	♈	8	19	11	33	19	20	♊ 2	19	23	32	19	20	48	19	12	35	19	1	11	19	10	21	19	19	46	19	23	31
20	20	10	20	10	54	20	♌	15	20	11	54	20	20	14	20	23	32	20	20	36	20	12	15	20	0	47	20	10	43	20	20	0	20	23	32
21	19	57	21	10	33	21	0	39	21	12	14	21	20	26	21	23	♋32	21	20	24	21	11	55	21	0	24	21	11	4	21	20	13	21	23	♍ 32
22	19	43	22	10	11	22	1	3	22	12	34	22	20	38	22	23	31	22	20	♌ 12	22	11	♍34	22	0	S 0	22	11	25	22	20	→ 26	22	23	31
23	19	29	23	9	49	23	1	27	23	12	54	23	20	49	23	23	31	23	20	0	23	11	14	23	0	♎ 24	23	11	♏46	23	20	38	23	23	31
24	19	14	24	9	27	24	1	50	24	13	14	24	21	0	24	23	30	24	19	47	24	10	53	24	0	47	24	12	7	24	20	50	24	23	29
25	18	59	25	9	4	25	2	14	25	13	34	25	21	10	25	23	29	25	19	34	25	10	32	25	1	11	25	12	28	25	21	2	25	23	27
26	18	44	26	8	42	26	2	38	26	13	53	26	21	21	26	23	27	26	19	21	26	10	11	26	1	34	26	12	49	26	21	13	26	23	25
27	18	29	27	8	19	27	3	1	27	14	12	27	21	31	27	23	24	27	19	7	27	9	50	27	1	58	27	13	10	27	21	24	27	23	22
28	18	13	28	7	57	28	3	25	28	14	31	28	21	41	28	23	21	28	18	53	28	9	29	28	2	21	28	13	30	28	21	34	28	23	19
29	17	57		7	34	29	3	48	29	14	49	29	21	50	29	23	17	29	18	39	29	9	7	29	2	45	29	13	50	29	21	44	29	23	15
30	17	41				30	4	11	30	15	7	30	21	59	30	23	13	30	18	24	30	8	45	30	3	8	30	14	10	30	21	54	30	23	11
31	17	24				31	4	34				31	22	7				31	18	9	31	8	23				31	14	29				31	23	6

The first Yeare after the LEAP-YEARE.

Januar.			Februar.			March.			April.			May.			June.			July.			Augusst.			Septemb.			October.			Novemb.			Decemb.		
da.	de.	mi.	da.	de.	mi.	da.	de.	mi.	da.	de.	mi.	da.	de.	mi.	da.	de.	mi.	da.	de.	mi.	da.	de.	mi.	da.	de.	mi.	da.	de.	mi.	da.	de.	mi.	da.	de.	mi.
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2	22	55	2	16	36	2	6	54	2	5	14	2	15	38	2	22	21	2	23	5	2	17	44	2	7	46	2	3	48	2	15	1	2	22	10
3	22	49	3	16	18	3	6	31	3	5	37	3	15	55	3	22	28	3	23	0	3	17	28	3	7	24	3	4	12	3	15	20	3	22	18
4	22	42	4	16	0	4	6	8	4	6	0	4	16	13	4	22	35	4	22	55	4	17	12	4	7	2	4	4	35	4	15	39	4	22	26
5	22	35	5	15	42	5	5	45	5	6	23	5	16	30	5	22	41	5	22	50	5	16	55	5	6	39	5	4	58	5	15	57	5	22	34
6	22	28	6	15	23	6	5	22	6	6	45	6	16	46	6	22	47	6	22	44	6	16	39	6	6	16	6	5	22	6	16	15	6	22	41
7	22	20	7	15	4	7	4	58	7	7	8	7	17	3	7	22	53	7	22	38	7	16	22	7	5	54	7	5	45	7	16	33	7	22	48
8	22	12	8	14	45	8	4	35	8	7	30	8	17	19	8	22	58	8	22	31	8	16	5	8	5	31	8	6	8	8	16	51	8	22	54
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10	21	54	10	14	6	10	3	48	10	8	15	10	17	51	10	23	8	10	22	16	10	15	30	10	4	46	10	6	54	10	17	25	10	23	5
11	21	44	11	13	47	11	3	24	11	8	37	11	18	6	11	23	12	11	22	8	11	15	12	11	4	23	11	7	17	11	17	42	11	23	10
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13	21	24	13	13	6	13	2	37	13	9	20	13	18	36	13	23	20	13	21	50	13	14	36	13	3	36	13	8	2	13	18	14	13	23	18
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15	21	2	15	12	· 25	15	1	50	15	10	3	15	19	5	15	23	26	15	21	32	15	13	58	15	2	50	15	8	47	15	18	45	15	23	24
16	20	50	16	12	♓4	16	1	26	16	10	24	16	19	19	16	23	28	16	21	20	16	13	39	16	2	27	16	9	9	16	19	0	16	23	27
17	20	38	17	11	43	17	1	2	17	10	45	17	19	33	17	23	29	17	21	12	17	13	20	17	2	3	17	9	31	17	19	15	17	23	29
18	20	26	18	11	22	18	0	39	18	11	6	18	19	46	18	23	30	18	21	1	18	13	0	18	1	40	18	9	53	18	19	29	18	23	30
19	20	13	19	11	0	19	♈	15	19	11	♉27	19	19	59	19	23	31	19	20	50	19	12	40	19	1	17	19	10	15	19	19	43	19	23	31
20	20	♒ 0	20	10	39	20	♌	9	20	11	48	20	20	11	20	23	32	20	20	39	20	12	20	20	0	53	20	10	37	20	19	57	20	23	32
21	19	46	21	10	17	21	0	33	21	12	8	21	20	♊23	21	23	32	21	20	28	21	12	0	21	0	30	21	10	58	21	20	10	21	23	♍ 32
22	19	32	22	9	55	22	0	57	22	12	28	22	20	35	22	23	♋32	22	20	16	22	11	♍40	22	0	♎ 6	22	11	20	22	20	→ 23	22	23	32
23	19	18	23	9	33	23	1	20	23	12	48	23	20	46	23	23	31	23	20	♌ 4	23	11	20	23	0	17	23	11	♏41	23	20	35	23	23	31
24	19	3	24	9	11	24	1	44	24	13	8	24	20	57	24	23	30	24	19	51	24	10	59	24	0	41	24	12	2	24	20	47	24	23	30
25	18	48	25	8	48	25	2	8	25	13	27	25	21	8	25	23	29	25	19	38	25	10	38	25	1	4	25	12	23	25	20	59	25	23	28
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27	18	17	27	8	3	27	2	55	27	14	6	27	21	28	27	23	24	27	19	11	27	9	56	27	1	51	27	13	4	27	21	21	27	23	23
28	18	1	28	7	40	28	3	18	28	14	25	28	21	38	28	23	21	28	18	57	28	9	35	28	2	15	28	13	24	28	21	32	28	23	20
29	17	45				29	3	42	29	14	43	29	21	47	29	23	18	29	18	43	29	9	14	29	2	38	29	13	44	29	21	42	29	23	16
30	17	28				30	4	5	30	15	2	30	21	56	30	23	14	30	18	29	30	8	52	30	3	2	30	14	4	30	21	52	30	23	12
31	17	11				31	4	28				31	22	5				31	18	14	31	8	30	31				14	23				31	23	7

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The TABLES, Of the Suns Declination after the New ſtile,

The ſecond Yeare after the LEAP-YEARE.

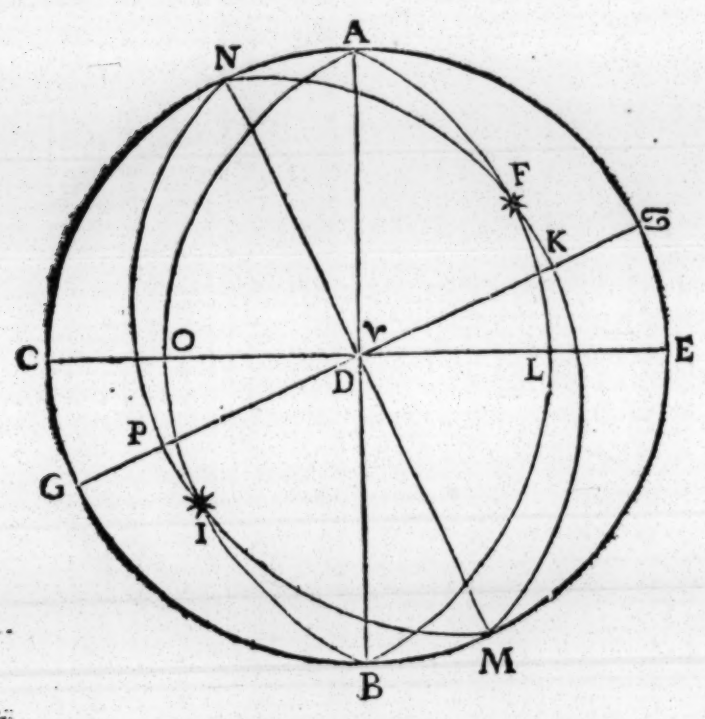
Januar.			Februar.			March.			April.			May.			June.			July.			Auguſt.			Septemb.			October.			Novemb.			Decemb.		
da.	de.	mi.	da.	de.	mi.	da.	de.	mi.	da.	de.	mi.	da.	de.	mi.	da.	de.	mi.	da.	de.	mi.	da.	de.	mi.	da.	de.	mi.	da.	de.	mi.	da.	de.	mi.	da.	de.	mi.
1	23	3	1	16	58	1	7	23	1	4	46	1	15	15	1	22	11	1	23	11	1	18	2	1	8	13	1	3	19	1	14	38	1	21	59
2	22	57	2	16	41	2	7	0	2	5	10	2	15	33	2	22	18	2	23	7	2	17	47	2	7	51	2	3	43	2	14	57	2	22	8
3	22	51	3	16	23	3	6	37	3	5	33	3	15	51	3	22	25	3	23	2	3	17	31	3	7	29	3	4	6	3	15	16	3	22	16
4	22	45	4	16	5	4	6	14	4	5	56	4	16	8	4	22	32	4	22	57	4	17	15	4	7	7	4	4	29	4	15	34	4	22	24
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6	22	31	6	15	28	6	5	27	6	6	41	6	16	42	6	22	46	6	22	45	6	16	42	6	6	23	6	5	16	6	16	11	6	22	39
7	22	23	7	15	9	7	5	4	7	7	3	7	16	59	7	22	52	7	22	39	7	16	25	7	6	0	7	5	39	7	16	29	7	22	46
8	22	15	8	14	50	8	4	41	8	7	26	8	17	15	8	22	57	8	22	32	8	16	8	8	5	37	8	6	2	8	16	47	8	22	52
9	22	6	9	14	31	9	4	17	9	7	48	9	17	31	9	23	2	9	22	25	9	15	51	9	5	15	9	6	25	9	17	4	9	22	58
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13	21	27	13	13	11	13	2	42	13	9	16	13	18	33	13	23	19	13	21	53	13	14	40	13	3	43	13	7	57	13	18	10	13	23	16
14	21	16	14	12	50	14	2	18	14	9	37	14	18	47	14	23	22	14	21	44	14	14	21	14	3	20	14	8	19	14	18	26	14	23	20
15	21	5	15	12	30	15	1	55	15	9	59	15	19	2	15	23	25	15	21	35	15	14	2	15	2	57	15	8	41	15	18	41	15	23	23
16	20	53	16	12	9	16	1	31	16	10	20	16	19	16	16	23	27	16	21	25	16	13	43	16	2	33	16	9	4	16	18	56	16	23	26
17	20	41	17	11	♓48	17	1	7	17	10	41	17	19	29	17	23	29	17	21	15	17	13	24	17	2	10	17	9	26	17	19	11	17	23	28
18	20	29	18	11	27	18	0	43	18	11	1	18	19	42	18	23	30	18	21	4	18	13	4	18	1	46	18	9	48	18	19	25	18	23	30
19	20	16	19	11	5	19	0	♈20	19	11	♉22	19	19	55	19	23	31	19	20	53	19	12	45	19	1	23	19	10	10	19	19	39	19	23	31
20	20	♊3	20	10	44	20	0	N 4	20	11	43	20	20	8	20	23	32	20	20	42	20	12	25	20	0	59	20	10	31	20	19	53	20	23	32
21	19	50	21	10	22	21	0	28	21	12	3	21	20	♊20	21	23	32	21	22	31	21	12	5	21	0	36	21	10	53	21	20	6	21	23	♍32
22	19	36	22	10	0	22	0	51	22	12	23	22	20	32	22	23	♋32	22	20	19	22	11	♌44	22	0	♎12	22	11	14	22	20	♑19	22	23	32
23	19	22	23	9	38	23	1	15	23	12	43	23	20	44	23	23	31	23	20	♌7	23	11	24	23	0	11	23	11	♍35	23	20	32	23	23	31
24	19	7	24	9	16	24	1	39	24	13	3	24	20	55	24	23	30	24	19	45	24	11	4	24	0	35	24	11	56	24	20	44	24	23	29
25	18	52	25	8	54	25	2	2	25	13	23	25	21	6	25	23	29	25	19	41	25	10	43	25	0	58	25	12	17	25	20	56	25	23	28
26	18	37	26	8	31	26	2	26	26	13	42	26	21	17	26	23	27	26	19	28	26	10	22	26	1	22	26	12	38	26	21	8	26	23	26
27	18	21	27	8	8	27	2	40	27	14	1	27	21	27	27	23	25	27	19	15	27	10	1	27	1	45	27	12	58	27	21	19	27	23	23
28	18	5	28	7	46	28	3	13	28	14	20	28	21	36	28	23	22	28	19	1	28	9	40	28	2	9	28	13	18	28	21	30	28	23	20
29	17	49				29	3	36	29	14	59	29	21	45	29	23	19	29	18	47	29	9	19	29	2	32	29	13	38	29	21	40	29	23	17
30	17	32				30	3	59	30	14	57	30	21	54	30	23	15	30	18	32	30	8	57	30	2	56	30	13	58	30	21	50	30	23	13
31	17	15				31	4	23				31	22	3				31	18	17	31	8	35				31	14	18				31	23	9

The third Yeare after the LEAP-YEARE.

Januar.			Februar.			March.			April.			May.			June.			July.			Auguſt.			Septemb.			October.			Novemb.			Decemb.		
da.	de.	mi.	da.	de.	mi.	da.	de.	mi.	da.	de.	mi.	da.	de.	mi.	da.	de.	mi.	da.	de.	mi.	da.	de.	mi.	da.	de.	mi.	da.	de.	mi.	da.	de.	mi.	da.	de.	mi.
1	23	4	1	17	3	1	7	29	1	4	40	1	15	11	1	22	9	1	23	12	1	18	6	1	8	19	1	3	14	1	14	33	1	21	56
2	22	58	2	16	46	2	7	6	2	5	3	2	15	29	2	22	17	2	23	8	2	17	51	2	7	57	2	3	37	2	14	52	2	22	5
3	22	52	3	16	28	3	6	43	3	5	26	3	15	47	3	22	25	3	23	3	3	17	35	3	7	35	3	4	1	3	15	11	3	22	14
4	22	46	4	16	10	4	6	20	4	5	49	4	16	4	4	22	32	4	22	58	4	17	19	4	7	13	4	4	34	4	15	30	4	22	21
5	22	40	5	15	51	5	5	56	5	6	12	5	16	21	5	22	39	5	22	53	5	17	3	5	6	51	5	4	47	5	15	49	5	22	30
6	22	33	6	15	32	6	5	33	6	6	34	6	16	38	6	22	45	6	22	47	6	16	47	6	6	28	6	5	10	6	16	7	6	22	37
7	22	25	7	15	13	7	5	9	7	6	57	7	16	55	7	22	51	7	22	41	7	16	30	7	6	6	7	5	34	7	16	25	7	22	44
8	22	17	8	14	54	8	4	46	8	7	20	8	17	11	8	22	59	8	22	34	8	16	13	8	5	43	8	5	57	8	16	43	8	22	50
9	22	8	9	14	35	9	4	22	9	7	42	9	17	27	9	23	1	9	22	27	9	15	56	9	5	20	9	6	20	9	17	0	9	22	56
10	21	59	10	14	16	10	3	59	10	8	4	10	17	43	10	23	6	10	22	20	10	15	38	10	4	57	10	6	43	10	17	17	10	23	2
11	21	49	11	13	56	11	3	35	11	8	26	11	17	49	11	23	10	11	22	12	11	15	20	11	4	35	11	7	6	11	17	34	11	23	7
12	21	39	12	13	36	12	3	11	12	8	48	12	18	14	12	23	14	12	22	4	12	15	2	12	4	12	12	7	28	12	17	50	12	23	11
13	21	29	13	13	16	13	2	48	13	9	10	13	18	29	13	23	18	13	21	55	13	14	44	13	3	49	13	7	51	13	18	6	13	23	15
14	21	18	14	12	56	14	2	24	14	9	31	14	18	44	14	23	21	14	21	46	14	14	26	14	3	26	14	8	13	14	18	22	14	23	18
15	21	7	15	12	35	15	2	0	15	9	53	15	18	58	15	23	24	15	21	37	15	14	7	15	3	2	15	8	36	15	18	37	15	23	21
16	20	56	16	12	14	16	1	37	16	10	14	16	19	12	16	23	27	16	21	27	16	13	48	16	2	39	16	8	59	16	18	52	16	23	24
17	20	44	17	11	53	17	1	13	17	10	35	17	19	26	17	23	29	17	21	17	17	13	29	17	2	15	17	9	21	17	19	7	17	23	27
18	20	32	18	11	32	18	0	49	18	10	♉56	18	19	39	18	23	30	18	21	7	18	13	9	18	1	52	18	9	43	18	19	22	18	23	29
19	20	29	19	11	♓11	19	0	26	19	11	17	19	19	52	19	23	31	19	20	56	19	12	50	19	1	28	19	10	4	19	19	36	19	23	31
20	20	♊7	20	10	49	20	0	♈2	20	11	38	20	20	5	20	23	32	20	20	45	20	12	30	20	1	5	20	10	26	20	19	50	20	23	♍32
21	19	54	21	10	27	21	0	N22	21	11	58	21	20	♊17	21	23	32	21	20	34	21	12	10	21	1	41	21	10	48	21	20	3	21	23	♍32
22	19	40	22	10	5	22	0	45	22	12	18	22	20	29	22	23	♋32	22	20	♌22	22	11	♍50	22	0	♎18	22	11	9	22	20	♑16	22	23	32
23	19	26	23	9	43	23	1	9	23	12	38	23	20	41	23	23	31	23	20	10	23	11	30	23	0	S 6	23	11	♍31	23	20	29	23	23	31
24	19	11	24	9	21	24	1	33	24	12	58	24	20	52	24	23	30	24	19	57	24	11	9	24	0	29	24	11	52	24	20	41	24	23	30
25	18	56	25	8	58	25	1	56	25	13	18	25	21	3	25	23	29	25	19	44	25	10	48	25	0	53	25	12	13	25	20	53	25	23	29
26	18	41	26	8	36	26	2	20	26	13	37	26	21	14	26	23	27	26	19	31	26	10	27	26	1	16	26	12	34	26	20	5	26	23	27
27	18	25	27	8	14	27	2	44	27	13	56	27	21	24	27	23	25	27	19	18	27	10	6	27	1	40	27	12	54	27	20	16	27	23	24
28	18	9	28	7	51	28	3	7	28	14	15	28	21	34	28	23	22	28	19	4	28	9	45	28	2	3	28	13	14	28	21	27	28	23	21
29	17	53				29	3	30	29	14	34	29	21	43	29	23	19	29	18	50	29	9	24	29	2	27	29	13	35	29	21	37	29	23	18
30	17	37				30	3	54	30	14	53	30	21	52	30	23	16	30	18	36	30	9	3	30	2	50	30	13	55	30	21	47	30	23	14
31	17	20				31	4	17				31	22	1				31	18	21	31	8	41				31	14	14				31	23	10

The 12. Chapter, Of the length and breadth of the fixed Starres.

THe Starres of the eigth heaven are called Fixed Starres, becauſe (unlike the Plannets without motion) they ſtand alwayes faſt and fixed in one faſhion and diſtance one from the other, and are carryed about altogether one with the other by the *Primum Mobile:* they are marked according to length and breadth. Their length is a part of the Ecliptique, contained betweene two halfe circles, going both out of the Poles of the Ecliptique, the one through the ſpring Equinoctiall, or the beginning of Aries, the other through the Starres themſelves. Their breadth is a Bow of the like halfe Circle betweene the Ecliptique Line and the Starres: That is two fold Northerly & Southerly, the Northerly which are Northwards from the Ecliptique, and the Southerly which ſtand Southward from them



Demonſtration.

LEt the Ecliptique Line bee G D H. Let N bee the Northerne, and M the Southerne Pole thereof: F a certaine Starre. Let two halfe Circles bee drawne out of the foreſaid Poles, the one N D M through the ſpring Equinoctiall to D. The other through the Starre F deviding the Ecliptique in K: that part of the Ecliptique D K is the length of ſuch a Starre, and the Bow or part of the ſaid halfe Circle K F is his breadth towards the North, becauſe that it ſtandeth by North of the Ecliptique.

The 13. Chapter, Concerning the right Aſcenſion and Declination of the fixed Starres.

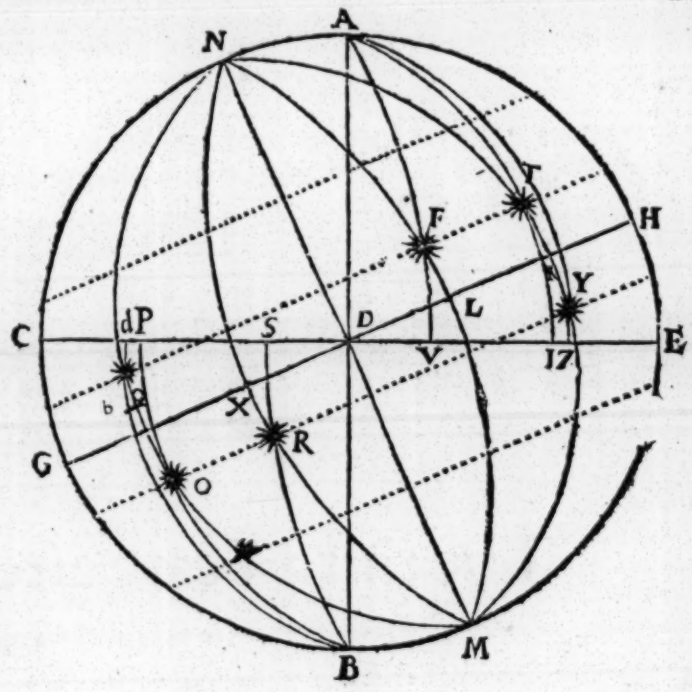
THe right Aſcenſion of the Starres is a part of the Equinoctiall, contained betweene two halfe circles, going both out of the Poles of the World, the one through the ſpring Equinoctiall, the other through the Starres. Their declination, beeing a bow of the like halfe circle betweene the Equinoctiall and the ſaid ſtarres. This is alſo two fold Northerly that which is by north the Line, and Southerly which ſtand by South from it.

Demonſtration.

IN the foregoing Figure, let C D E bee the Equinoctiall line. A the North, and B the South Pole of the world, F a certaine Starre; draw two halfe Circles out of the foreſaid Poles, the one A D B through the Equinoctiall or beginning of Aries, the other through the Starre marked with F which devideth the Equinoctiall in L. The part of the Equinoctiall L D is the right Aſcenſion of ſuch a Starre and the Bow or part of the ſame Circle L F. his declination towards the North, or O I from the Starre to I towards the South.

The 14. Chapter, Concerning the change of the declination of the fixed Starres.

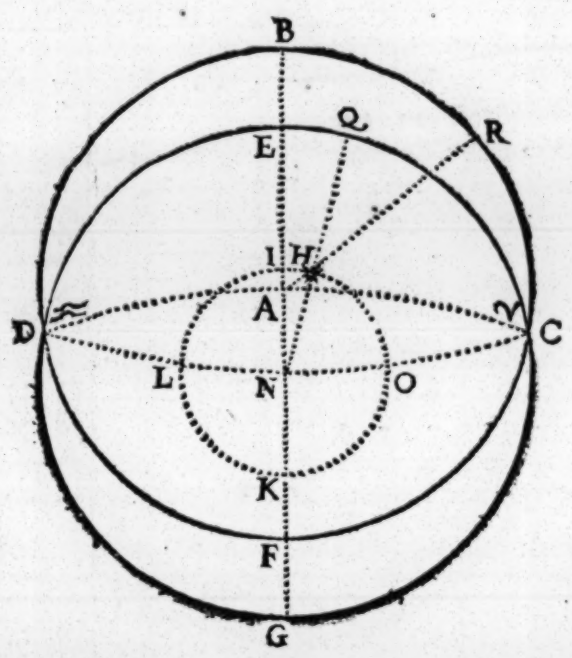
EVen as the ſtarry heaven in our ſight is driven about every 24 Howres by the *Primum Mobile* upon the axepoints or Poles of the world from eaſt to weſt: ſo are theſe alſo carried about upon the Poles of the Ecliptique Line once in 25400 yeares, on the contrary from weſt to eaſt, even as the Sun once every yeare. By which the length of the Starres changeth every hondred yeares 1 degree, and 25 minutes, or elſe every 20 yeares 17 minutes: but their breadth that is the diſtance from the Ecliptique remaineth unchangeable alwayes the ſame. Through the foreſaid change of the length (by length of time) changeth alſo the declination of the one more and alſo ſooner then of the other. Some are made leſſe, and ſome grow bigger. Some of them having Northerly declination become ſouther, and ſome others having ſoutherly declination become on the contrary northerly.



Demonſtration.

LEt C D E bee the Equinoctiall, A the northerne and B the ſoutherne Pole of the World, G D H the Ecliptique line N M the Poles thereof, G the beginning of Capricorne. D of Aries and H the end of Gemini or beginning of Cancer, let (as is before ſaid the Starre at F its length be in the Ecliptique to L. its breadth by north of it at L F its northerly declination is then V F. If then the foreſaid ſtarre in many yeares runneth in length from F to L paralell with D H its breadth reſteth K T even untill the forogoing F L but its declination I T, is more then V F, the firſt becauſe that it beeing paralell with D H is more wended from the Equinoctiall line. The ſtarre at O whoſe length let it bee in the Ecliptique to Q and its breadth Q O hath ſoutherly declination P O: but running in length from O to R paralell with Q X its breadth remaineth X R even to Q O but its ſoutherly declination R S is leſſe then O P, becauſe that it beeing paralell with G D is come neerer the Equinoctiall. But if the ſame ſtarre commeth to run in length unto Y, its declination ſhall bee Y Z by north the line. That is ſpoken of the 6 firſt ſignes ♑ ♒ ♓ ♈ ♉ ♊. In the ſame manner commeth to paſſe the contrary part in the other 6 ſignes ♋ ♌ ♍ ♎ ♏ and ♐ thus. In the ſame figure let H bee the beginning of Cancer, D Libra, and G the end of Sagitarius

rius. If a Starre at T having Northerly declination T I runneth in length untill F, its declination F V is leſſe then T I, becauſe it is come nearer the Equinoctiall, then if ſo be that it runneth in length untill B, its declination which was firſt northerly ſhall then bee ſoutherly from B to D. Through the foreſayd motions of the eigth Spheare changeth alſo the declination of the Northſtarre, which is every yeare greater, that is, hee departeth the longer the more from the Equinoctiall, and commeth neerer the Pole, which ſhall endure to the yeare of our Lord 2091, then ſhall hee bee neareſt and no more then 26 minutes, and a halfe diſtant from it and after that time by little and little ſhall wend from it, ſo that 12700 yeares afterwards it ſhall ſtand from the Pole 47 degrees and 56 minutes. How this commeth to paſſe may plainly bee conceived out of this manner of Figure.



Let A bee the northerne Pole of the world in the middle of the Equinoctiall B D F C N the Pole of the Ecliptique in the middle of the Ecliptique E D G C, H the Northſtarre, its breadth from the Ecliptique is Q H 66 degrees and 2 minutes, and its diſtance from the Pole of the Zodiaque N H 23 degrees and 58 minutes, they remaine alwayes alike even as the breadth and diſtance of all fixed Starres from the Pole of the Zodiaque N H 23 degrees and 58 minutes they remaine alwayes one and the ſame even as the breadth and diſtance of all fixed Starres is from the Zodiaque Pole, as heretofore is ſayd. Its length from the Spring Equinoctiall or beginning of Aries for the yeare 1625. is C Q 83 degrees and 24 minutes.

Let there bee drawne a Circle out of N the Pole of the Ecliptique, as I L K O H; whoſe halfe Diameter let bee N H 23 degrees and 58 minutes even to the diſtance of the Northſtarre from the Zodiaque Pole, there in is cloſed the Northpole of the world at A as beeing leſſe different from the Zodiaque Pole then the Northſtarre. Upon the like Circle the Northſtarre taketh his compaſſe about the Pole of the Zodiaque (even as all the fixed Starres in 25400 yeares, its diſtance from the worlds Pole is for the yeare 1625 A H 2 degrees 42 minutes and ſhall in the yeare of our Lord 2091 bee come from H to I beeing then neareſt to the worlds Pole, and ſtands no further of then 26½ minut. going forwards from I alongſt to L untill K it ſhall then bee diſtant from the worlds Pole marked with A K 27 degrees and 60 minutes.

But becauſe the Starres keepe not alwayes one kind of declination, wee have for the ſurtherance of Mariners prepared theſe two following Tables. The one ſheweth their declination for the yeare 1645. And the ſecond for the yeare 1654. Beſides the declination there is adjoyned the complement of the declination, that is, how wide they ſtand from the Pole.

A Table of the Declination of the cheife of the fixed Starres, with their diſtance from the Pole, in the yeare 1645, &c. and 1655.

Theſe Starres following are all of them placed in the Southſide of the Equinoctiall Line, and have ſoutherly Declination.

	Anno 1645.		Anno 1655.	
	Southerly declination. degr. min.	the diſtãce from the S. Pole degr. min.	Southerly declination. degr. min.	the diſtãce from the S. Pole. degr. min.
The Northermoſt in the whales tayle.	10 46	79 14	10 43	79 17
The Southermoſt in the whales tayle.	19 57	70 3	19 54	70 6
Regel, the left foot of Orion.	8 39	81 21	8 38	81 22
The firſt of the three in the Girdle of Orion, or the 3 Kings.	0 36	89 24	0 36	89 24
The ſecond in the girdle, or 3 Kings.	1 27	88 33	1 27	88 33
The third.	2 10	87 50	2 10	87 50
The great dogge, Syrius.	16 13	73 47	16 13	73 47
The heart of the water-ſnake.	7 8	82 52	7 10	82 50
Spica Virginis, or the corneare.	9 15	80 45	9 18	80 42
The South Balance.	14 30	75 30	14 33	75 27
The North Balance.	8 1	81 59	8 4	81 56
The Northermoſt and firſt at the left hand of the ſnakebearer Ophiuchus.	2 46	87 14	2 48	87 12
The left knee of Ophiuchus.	9 46	80 14	9 48	80 12
The right knee of the ſnakebearer.	15 12	74 48	15 13	74 47
Antares the heart of the Scorpion.	25 33	64 27	25 35	64 25
The Northermoſt of the 2 in the hornes of Capricorne.	13 33	76 27	13 32	76 28
The Southermoſt of the two.	15 50	74 10	15 49	74 11
The former or moſt weſterly, of the 2 ſtarres in the tayle of Capricorne.	18 10	71 50	18 8	71 52
The Second moſt eaſterly.	17 39	72 21	17 37	72 23
The left ſhoulder of Aquarius.	7 4	82 56	7 2	82 58
The right ſhoulder of Aquarius.	2 0	88 0	1 57	88 3
The uttermoſt of Aquarius named Famahand.	31 25	58 35	31 22	58 38

These which follow are ſcituate in the Northſide of the Æquinoctiall Line, and Decline Northward.

	Anno 1654. Northerly declination. degr. min	Anno 1654. the diſtãce from the N. Pole degr. min	Anno 1655. Northerly declination. degr. min.	Anno 1655. the diſtãce from the N. Pole. degr. min.
Alrucuba the northſtar.	87 25	2 35	87 28	2 32
The midlmoſt or brighteſt of the Watchmen. - - - -	75 40	14 20	75 37	14 23
The breſt of Caſſiopeia.	54 37	35 23	54 40	35 20
The hippe of Caſſiopeia.	58 49	31 11	58 52	31 8
The knee of Caſſiopeia.	58 22	31 38	58 25	31 35
The brighteſt in the cleare of Caſſio.	57 13	32 47	57 17	32 43
The head of Andromeda. - - - - -	27 9	62 51	27 12	62 48
The Girdle of Andromeda. - - - -	33 47	56 13	33 50	56 10
The moſt Southerly foot of Andromeda.	40 36	49 24	40 39	49 21
The brighteſt in the head of the Ram.	21 46	68 14	21 49	68 11
The brighteſt in the mouth of the Whale.	2 40	87 20	2 42	87 18
The brighteſt in the head of Meduſa.	39 33	50 27	39 35	87 25
The brighteſt in the ſide of Perſeus. - - -	48 31	41 29	48 33	41 27
Aldebaran the South eye of the Bull.	15 48	74 12	15 50	74 10
The North horne of the Bull. - - - - - -	28 16	61 44	28 17	16 43
The South horne of the Bull. - - - - -	20 54	69 6	20 54	69 6
The left ſhoulder of the Gayant Orion. - -	5 59	84 1	6 0	84 0
The right ſhoulder of Orion. - - - - -	7 18	82 42	7 18	82 42
Hircus or Capella in the left ſhoulder of the carter Erichtonius.	45 35	44 25	45 36	44 24
The right ſhoulder of Erichtonius. - -	44 52	45 8	44 52	45 8
The brighteſt in the foot of the twinnes. - -	16 40	73 20	16 40	73 20
The head of the Northermoſt twinne Caſtor. - - - - - -	32 36	57 24	32 35	57 25
The head of the ſouther moſt twinne Pollux.	28 50	61 10	28 49	61 11
Procyon the little dogge	6 7	83 53	6 6	83 54
Regulus, Baſiliſcus the heart of the Lyon.	13 40	76 20	13 37	76 23
The middlemoſt and cleareſt in the neck of the Lyon. - -	21 37	68 23	21 34	68 26
The brighteſt in the back of the Lyon.	22 28	67 32	22 24	67 36
The taile of the Lyon.	16 33	73 27	16 30	73 30
The Northermoſt hinderwheele of the great Wagon.	63 40	26 20	63 37	26 23
The Southermoſt hinderwheele of the great Wagon. - -	58 17	31 43	58 14	31 46
The Northmoſt forewhele of the Wagon.	59 0	31 0	58 57	31 3
The Souther forewheel of the Wagon.	55 41	34 19	55 37	34 22
The neereſt Horſe to the Wagon. - - -	57 56	32 4	57 53	32 7
The middlemoſt Horſe.	56 49	33 11	56 46	33 14
The uttermoſt Horſe.	51 8	38 52	51 5	38 55
Vindemiatrix the north Wing of Virgo.	12 54	77 6	12 51	77 9
The Girdle of the Virgin.	5 22	84 38	5 19	84 41
The left ſhoulder of Bootes. - - - -	39 50	50 10	39 47	50 13
The bright Star betwixt the thighes of Bootes Arcturus. - - -	21 5	68 55	21 2	68 58
The brighteſt in the North Crowne.	27 57	62 3	27 55	62 5
The brighteſt in the neck of the Serpent Ophiuchus. - - -	7 37	82 23	7 35	82 25
The head of Hercules.	14 51	75 9	14 50	75 10
The head of the Serpentbearer.	12 52	77 8	12 51	77 9
The brighteſt in the Dragons head.	51 37	38 23	51 37	38 23
Lyra. - - - - - -	38 30	51 30	38 30	51 30
The taile of the Eagle.	13 24	76 36	13 25	76 35
Vultur the middlemoſt and brighteſt in the Eagle. - - - - -	8 0	82 0	8 1	81 50
The breſt of the Swan.	39 9	50 51	39 11	50 49
The taile of the Swan.	44 3	45 57	44 5	45 55
The Girdle of Cephus.	69 1	20 59	69 3	20 57
That in the mouth of Pegaſus.	88 16	81 44	8 18	81 42
Sheat the brighteſt in the legge of Pegaſus	26 10	63 50	26 13	63 47
Marcab the foot of Pegaſus. - - - -	13 19	76 41	13 21	76 39
The uttermoſt in the Wing of Pegaſus.	13 13	76 47	13 16	76 44

By this table you may finde the declination of any of theſe Starres, *in* the yeeres betweene, provided, that you proportion the difference of the declination to the difference of the time.

Example.

I deſire to know the Declination of the tayle of the Lyon in the yeere 1650. I find in the table of the yeere 1645. 16. gr. 33. min. and for the yeere 1655. 16. degrees, 30. min. the min. having as much taken from them as the yeeres, I finde 16 gr. and a halfe, leſſening declination.

II. *Example.*

I deſire to know the declination of Aldebaran the eye of the Bull in the yeere 1650. I finde in the yeere 1645, 15 gr. 48 min. and for the yeere 1655, 15 degr. 50 minut. the minut. having as much taken from them in proportion as the yeeres, I finde 15 gr. 49. min. increaſeing declination.

The 15. Chapter, how yow may eaſily learne to know the fixed Starres, and at what time every one of them commeth to the South.

HOw needfull and profitable it is for a Sea-faring man to have knowledge of the fixed ſtarres and their uſe, eſpecially in ſtrange voyages, and farre Navigations, that is more then well known to all experienced and underſtandig

ſtanding Steerman: moreover, becauſe wee have deſcribed in the foregoing chapter the declination of the fixed ſtares and their diſtance from the Pole, wee ſhall here ſhew you a way and fitting meanes how you ſhall eaſily learne to know them and that perfectly at all times when as every one of them come in the ſouth or at their height, and are fitting to be uſed.

Firſt you muſt know that the way of the Sunn in the heaven is immoveable with the fixed Starres with the which it is every day once turned about from eaſt to weſt without change, but onely that the Sunne doth contrary wiſe run this foreſaid yearely courſe from weſt to eaſt, whereby hee in his daily courſe, commeth ſo farr behind, that hee in a whole yeare goeth one courſe leſſe then the fixed ſtarres: and that the fixed ſtarres turne once more about in a yeare then the Sunn, ſo that they every day come 4 min. ſooner to the diviſion, that commeth every weeke to about halfe an houre & every month 2 houres, which that it may the better bee underſtood, wee will make it evident by an example taken from the ſtarre called Syrius, or Canis major the great dogge, which alwayes followeth a little after the Image of the Gyant Orion and his Girdle, which is called the three Kings, which appeare a little over the great Dogge, it is the greateſt and cleareſt of al the fixed ſtarres, which for the moſt part is knowne unto all Sea-faring men, his declination is Southward from the Line 16 degrees, and 13 minutes.

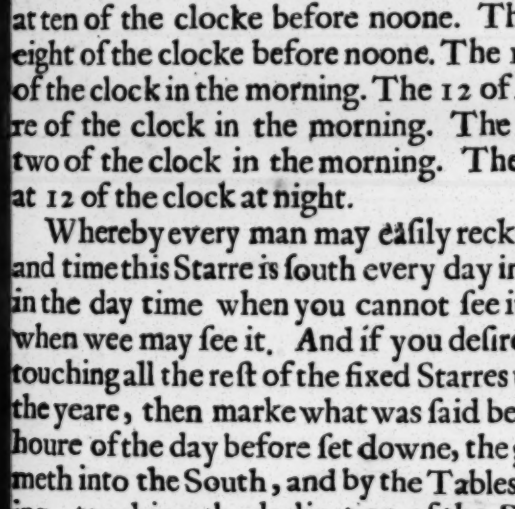
And it is ſouth upon the 24 of January new ſtile, at ten of the clock at night. The 23 of February at 8 of the clock at night. The 28 of March at ſix of the clock at night. The 30 of April at foure of the clock in the evening. The 30 of May at two of the clock afternoone. The 28 of June at 12 of the clock at noone, even with the Sun. The 28 of July, at ten of the clocke before noone. The 29 of Auguſt at eight of the clocke before noone. The 1 of October at ſix of the clock in the morning. The 12 of November at foure of the clock in the morning. The 1 of December at two of the clock in the morning. The 28 of December at 12 of the clock at night.

Whereby every man may eaſily reckon at what houre and time this Starre is ſouth every day in the yeare, as well in the day time when you cannot ſee it, as in the night when wee may ſee it. And if you deſire to know the like touching all the reſt of the fixed Starres upon every day in the yeare, then marke what was ſaid before, upon what houre of the day before ſet downe, the great Dogge commeth into the South, and by the Tables hereafter following, touching the declination of the Stars, marke how long time the Starre you ſeeke for, commeth into the South before or after the great Dogge, & by that meanes you ſhall finde the juſt and perfect time that you deſire.

The 16 Point. The Table of the declination of the fixed Stars; and alſo an Inſtruction of the time in which each of them commeth into the ſouth, alſo how you ſhall know them.

The Twinnes.

THe figure Gemini (in Engliſh the Twinnes) is ſcituated direct north, from the great Dogge, or Canis Major in the ſame manner as it is here deſcribed, the north head thereof commeth 40 minutes after the Dogge into the South, his declination is two and thirty degrees, and 37 minutes from the Line Northward.



The ſouth and loweſt head thereof of commeth 54 minutes after the great Dogge into the ſouth; and hath his declination towards the north, 28 degrees, 51 minutes.

The cleareſt in the Foot commeth a quarter of an houre before the great Dogge into the South, his declination is 16 degrees and 40 minutes towards the north.

Canis Minor, or the little Dogge, called Canicula, Procyon.

This little Dogge Canicula hath 3 ſtarres, in this forme, the cleareſt of them commeth 50 min. after the great Dogge into the South: his declination is ſix degrees, 7 minutes in the northſide of the Line.

The Water Snake, Hydra.

The Heart or the cleareſt in the Water-ſnake commeth after Syrius or the great Dog two houres, 40 minutes to the ſouth, his declination is in the Southſide of the Line 7 degrees and 8 minutes, and ſheweth it ſelfe with ſuch little ſtars as are here noted, whereby he is eaſily knowne.

The Lyon.

The Lyon hath foure beautifull ſtars, fit for uſe, & ſheweth it ſelfe with other, as is here ſet forth, the firſt and foremoſt of them is called Regulus or Baſiliſcus otherwiſe the Heart of the Lyon, which commeth 3 houres and 30 minutes after the great Dogge into the ſouth; his declination is 13 gr. forty min. in the northſide of the line; the ſecond called the necke of the Lyon 3 hour. 30 min. after the great Dogge into the ſouth; and hath his declination from the line 21 gr. 37 m. the Back of the Lyon comes into the ſouth 26 min. after the great Dogge: his declination is in the Northſide of the line 22 gr. 28 min. the taile of the Lyon comes 5 houres after the great Dogge into the ſouth: his declination is 16 gr. 33 min. in the Northſide of the Line.



Virgo, or the maide.

After followeth Virgo, whereof the principall and cleareſt ſhewes this ſhape, as they are here pourtrained: the Girdle of the Virgin comes into the South, ſix houres 12 minutes after the great Dogge, her declination is five grad. 22 minutes in the Northſide of the Line.

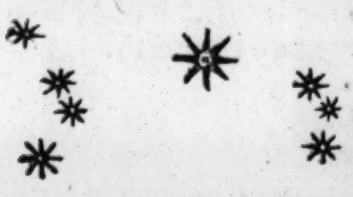
That which is in the Wing called Vindemiatrix comes into the South, 6 houres 16 min. after the great Dogge, her declination is in the Northſide of the line 12 degrees, 54 minutes.

The eare of corne or Spica Virginis commeth 6 houres and 36 min. after the great Dogge into the South, her declination is 9 degrees, 15 minutes in the Southſide of the Line.



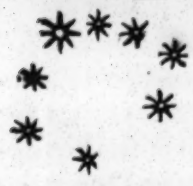
Bootes the Waineman.

Seven houres 30 minutes after the Star called Syrius, the cleareſt Star of Bootes comes into the South & ſtandeth between his thighes, in this forme, with ſome other Stars, and is called Arcturus, his declination is in the Northſide of the line 21 degrees 5 minutes.



The Northern Crowne.

After Bootes followeth the North Crowne, bearing faſhion of a Circle, as followeth, of the Mariners, it is called the Hoſpital, and when in cleare whether, they behold ſome ſmall Stars in it, they call them the ſick; the greateſt and cleareſt of them comes eight houres, 58 minutes after the great Dogge in to the South, its declination is in the Northſide of the Line 27 degrees, 57 minutes.

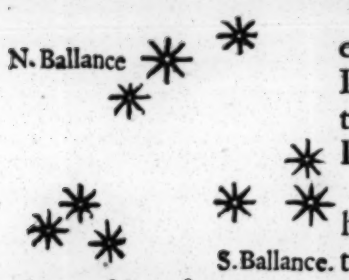


The Waights, Libra.

The ballance or Waights, follow the ſigne of Virgo as followeth.

The South Ballance comes eight houres after the great Dogge to the South, its declination is in the Southſide of the Line 14 degrees, 30 minutes.

The Norh Ballance comes 8 houres, 48 minutes after Syrius to the South, the declination thereof is 8 degrees, 58 minutes in the Southſide of the Line.



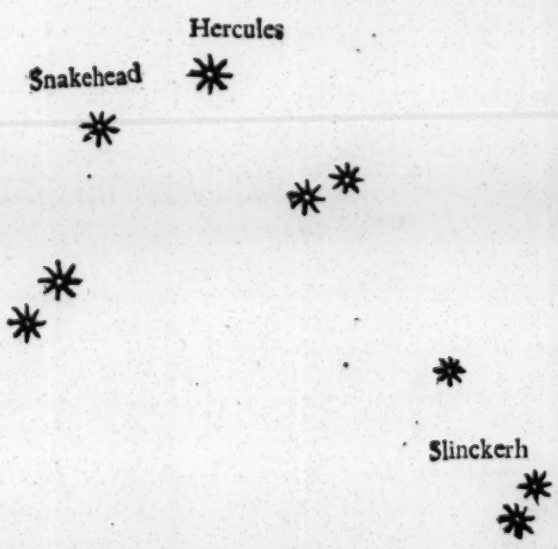
The Scorpion, Scorpio.

Then followeth the Scorpion, as this figure ſheweth, the heart of Scorpion, Antores commonly called, comes 9 houres, 38 minutes after Syrius into the South, his declination is 25 degrees 33 minutes in the Southſide of the Line.



The Snakebearer, and Hercules.

The Snakebearer, ſheweth himſelfe, as it appeareth in the figure, the formoſt Starre, and that which is moſt towards the north of the two, which ſtandeth on the left hand, comes nyn houres 25 minutes after the great Dogge into the South his declination is 2 degrees, 46 minutes South from the Line.



The head of the Snakebearer comes 10 houres, 48 minutes after Syrius to the South, his declination is 12 degrees, 52 minutes in the Northſide of the Line.

The head of Hercules ſtandeth by the head of Serpentarius, and comes 20 minutes before it into the South; and hath his Declination Northward 14 degrees, 51 minutes.

Lyra.

Then followes Lyra, in this manner, the greateſt with two little ons by it, which the Mariners call the three Caſtles, the lighteſt and cleareſt Starre, comes 11 houres, 55 minutes after the great Dogge into the South, the declination thereof is 38 degrees, 30 minutes, on the Northſide of the Line.



The Eagle.

Sheweth himſelf as this figure declareth, the cleareſt of theſe that is to ſay the middlemoſt of the three, comes 13 houres after the great Dogge, or 11 houres before, into the South, the declination thereof is 8 degrees on the Northſide of the line.

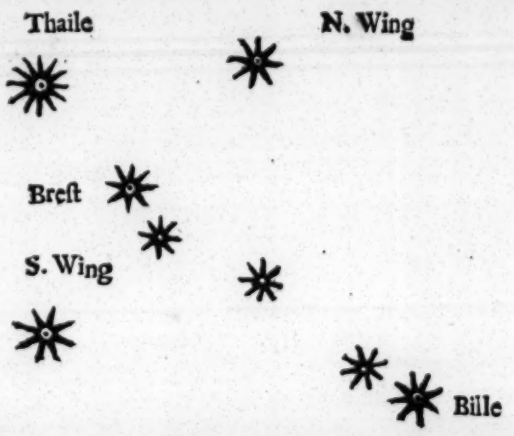


The Swanne.

The Swanne is ſhaped thus: the Starre that is the moſt North in the breſt, cometh 13 houres, 40 minutes or after 10 houres 20 minutes into the South before the great Dogge, and hath his declination in the Northſide of the Line 39 degrees, 9 minutes. That which ſtands moſt to the South of the two in the breſt, is a new ſtarre, and hath ſhewed it ſelf firſt in the yeer 1600, the North wing comes 10 houres, 4 minutes after the Dogge into the South, te Northern declination thereof is 44 degrees, 1[illegible] minutes.



The S. Wing comes 14 houres after the great Dogge into the South, the declination of it is 32 gr. and thirt[illegible] minut. in the Northſide of the Line. The lighteſt and



cleareſt of the Swanne, which is placed in the taile of it comes 14 houres after the great Dogge, or 10 houres before into the South, the declination of it is 44 degrees, 3 minutes in the Northſide of the Line.

Capricorne.

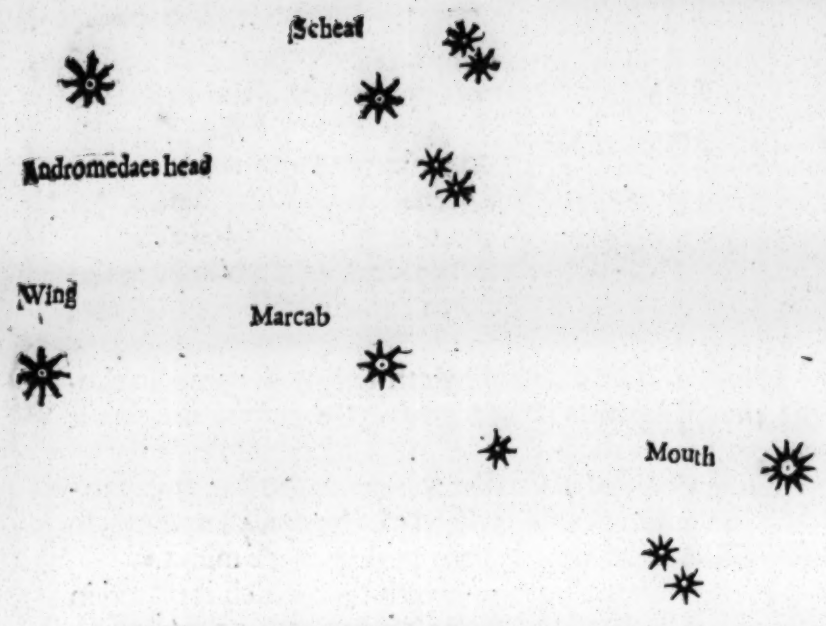
The moſt Southerly and cleareſt of twe two lighted in the houre of Capricorne, as is here to bee ſeen cometh 13 houres, 30 minutes after the great Dogge into the South; the declination is 15 degrees, 50 minutes in the Northſide of the Line.



The Flying Horſe.

The Flying Horſe Pegaſus, we may ſee in the heaven in this proportion, the Starre in the mouth comes 14 houres, 56 minutes after, or 9 houres, 4 minutes before the great Dogge into the South, his declination is 9 degrees, 15 minutes.

The

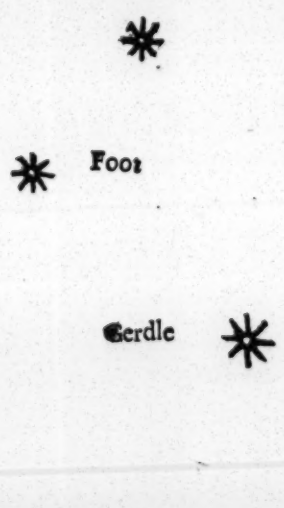


The Northſide of the line. That which ſtandeth on the right hippe or right legge called the Schaet, the ſame comes 16 houres, 16 minutes after the great Dogge, or 7 houres, 44 minutes before it into the South, the declination of it is 26 degrees, 9 minutes in the Northſide of the Line, at the ſame time comes the firſt and foremoſt into the South; placed in the Wing, which is called Marcab. The declination of it is 13 degrees, 18 minutes on the Northſide of the Line.

The laſt and utmoſt in the Wing of Pegaſus, comes 16 houres, 44 minutes after the great Dogge, or 7 houres 16 minutes before it into the South; the declination of it is 12 degrees, 3 minutes, in the Northſide of the Line.

The Head of Andromeda making with ſome Starres of Pegaſus a great quadrangle (whereby it is eaſily known) comes after the great Dogge into the South 17 houres, 24 minutes, or 6 houres, 36 minutes before it, the declination is 27 degrees, 39 minutes North from the Line.

The Image of Andromeda is placed in the Heavens in this ſort: that ſtarre that it is in the gridle comes before the great Dogge into the South 5 houres, 40 minutes,

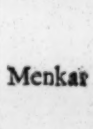


hath his declination in the Northſide of the line 33 degrees, 45 minutes that which is in the moſt Southerly foot comes 4 houres, 48 minutes before the great Dogge into the South, the declination of it is 40 degrees, 35 minutes in the Northſide of the Line.

The ſtarre named Fomahant is placed a good ſpace in the Southſide of the Flying horſe, in the uttermoſt part of the flood running from Aquarius, it is a great and cleare ſtarre, and comes 16 houres, 16 minutes after Syrius, or 7 houres, 44 minutes before it into the South, the declination thereof is 31 degrees, 26 minutes in the Southſide of the Line.

Cetus, or the Whalfish.

After theſe followes the Whaleſiſh, it hath two notable ſtarres in the tayle of it, the more Northerly comes before the great Dogge into the South 6 houres, 28 minutes, the declination of it is 10 degrees, 47 minutes in the ſouthſide of the Line, 24 minutes after comes the Southermoſt into the South, and it is in the Southſide of the Line 19 degrees 58 minutes.

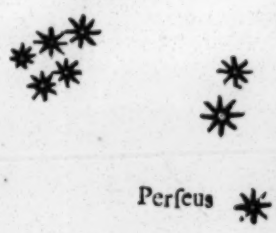


The cleareſt in the mouth named Menkar, ſhewes it ſelfe with two other ſtarres in this order, the declination is in the Northſide of the Line 2 degrees, 37 minutes.



In the head of Aries there is a cleare ſtarre appeareing with that in the Horne, in form as is here deſcribed, and comes foure houres, 43 minutes into the South, before the great Dogge, ſtandeth in the Northſide of the Line 21 degrees, 44 minutes.

Somewhat more Northerly followeth the head of Meduſa as it is here dechiphered, the cleareſt of theſe comes before the great Dogge into the ſouth 3 houres, 46 minutes, and is placed in the Northſide of the Line 39 grad. 42 minutes.



Directly North followes Perſeus a bright ſtarre in forme thus, and it comes before Syrius into the South three houres and a halfe, hath the declination in the Northſide of the Line 48 degrees, 31 minutes.

Then followes the image of the Bull in whoſe head there are ſome ſtarres in the forme of a bee hive laying a ſide the greateſt, brighteſt, and moſt eaſterly ſtarre, called the eye of the Bull, Aldebaran, or Oculus Tauri, comes two houres 14 min. before the great Dogge into the ſouth, his declination is in the Northſide of the line 15 degrees 48 minutes.



The Coachman, Ericthonius.

The figure of Auriga, or the Coachman, ſhewes himſelfe a little after the Bull in the ſouth, in ſuch ſort as is here deciphered, the greateſt & brighteſt of them called the goat, hircus, or capella, come 1 houre, 40 min. before the great Dogge into the South; the declination of it is 45 degrees, 34 min in the Northſide of the line.



The right ſhoulder goeth 57 minutes before the great Dogge toward the South; his declination is in the Northward 44 degrees, 51 minut.

Alſo that called the North Horne of Taurus, goes one houre, 22 minut. before the great Dogge into the South, his declination is 28 degrees, 15 minutes Northward.

The Gyant.

About the ſame time comes the Gyant Orion, being of this figure, it is eaſie to be known, the left Shoulder cometh before Sirius into the ſouth 1 houre, 24 min. the declination of it is 5 degrees, 59 minutes.



The right Shoulder commeth 58 minutes before the great Dogge, and hath 7 degrees, 17 minutes of northerly declination. The great and bright ſtarre in the left Foot called Regel, goeth one houre 32 minutes before the great Dogge into the ſouth, the declination of it is in the ſouthſide of the line 8 degr. 40 min.

The first of the three in the Girdle, which are called the three Kings, goe one houre 16 minutes before Syrius into the south; the declination of it is 36 minutes in the Southside of the Line.

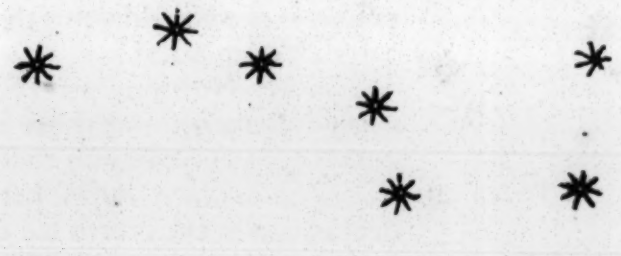
Foure minutes after commeth the second or middlemost into the South; the declination is 1 degr. 27 min.

Nine minutes after the first commeth the last or third of the three Kings into the South, and hath his declination in the Southside of the Line 2 degr. 10 minut.

These three Kinges stand alwayes and appeare a little above the great Dogge, whereby they are easily knowne.

Here doe follow some Starres which show themselves in the North, and therefore by some men may are called Northstares.

The Stares of the great Coach or Wagon, very serviable and fitt for those that sayle farre towards the



South; they come in the time here following specified unto their highest, the hinder weeles come intho the North to their highest after Syrius or the great Dogge 4 hour. 12 minutes, the most Northern hath his declination from the Equinoctiall 63 degrees, 41 minutes, and is distant from the Pole 26 degrees, 19 minutes; the declination of the Southermost is 58 degrees, 18 minutes, it is distant from the Pole 31 degrees, 42 minutes.

The Southermost of the forewheeles comes into the North to his highest right over the Pole 5 houres, 5 min. after the great Dogge is past the South; his declination is 55 degr. 42. min. in the Northside of the Line, and is distant from the Pole 34 degrees, 18 minutes.

The most Northern in the fore wheele followeth 23 minut. after, and then commeth to his highest; the declination of it is 59 degrees, 1 minute, and it standeth above the Pole 30 degrees, 59 minutes.

The Horse the next to coach commeth to its highest in the North, 6 houres, 8 minutes, after the great Dogge is gone through the South; it declineth to the North 57 degrees, 57 min. is distant from the Pole 32 degr. 3 min.

The middlemost Horse comes halfe an houre after it to the highest; the declination of it is 56 degrees, 50 minutes, therefore it standeth distant from the Pole 33 degrees, 10 minutes.

The uttermost Horse of the coach cometh to the highest 7 houres, 7 minut. after Syrius is past through the South, the declination of it is 51 degr. 9 minut. it is distant from the Pole 21 degr. 51 minutes.

The middlemost and brightest of the waiters declineth to the north 75 degr. 43 minutes, is distant from the Pole 14 degr. 17 minutes.

NOTA.

Touching the north Starre her declination, and how it is to be used, with the watchmen is decliniated in the discourse following.



The Dragons head is formed as this figure declareth, the star most southerly is the clearest, and cometh to the highest in the north 11 houres and 5 min. after that Syrius is past the South, the declination is 51 degr. 37 minut. in the northside of the Line; standeth from the Pole 38 degrees 23 minutes.



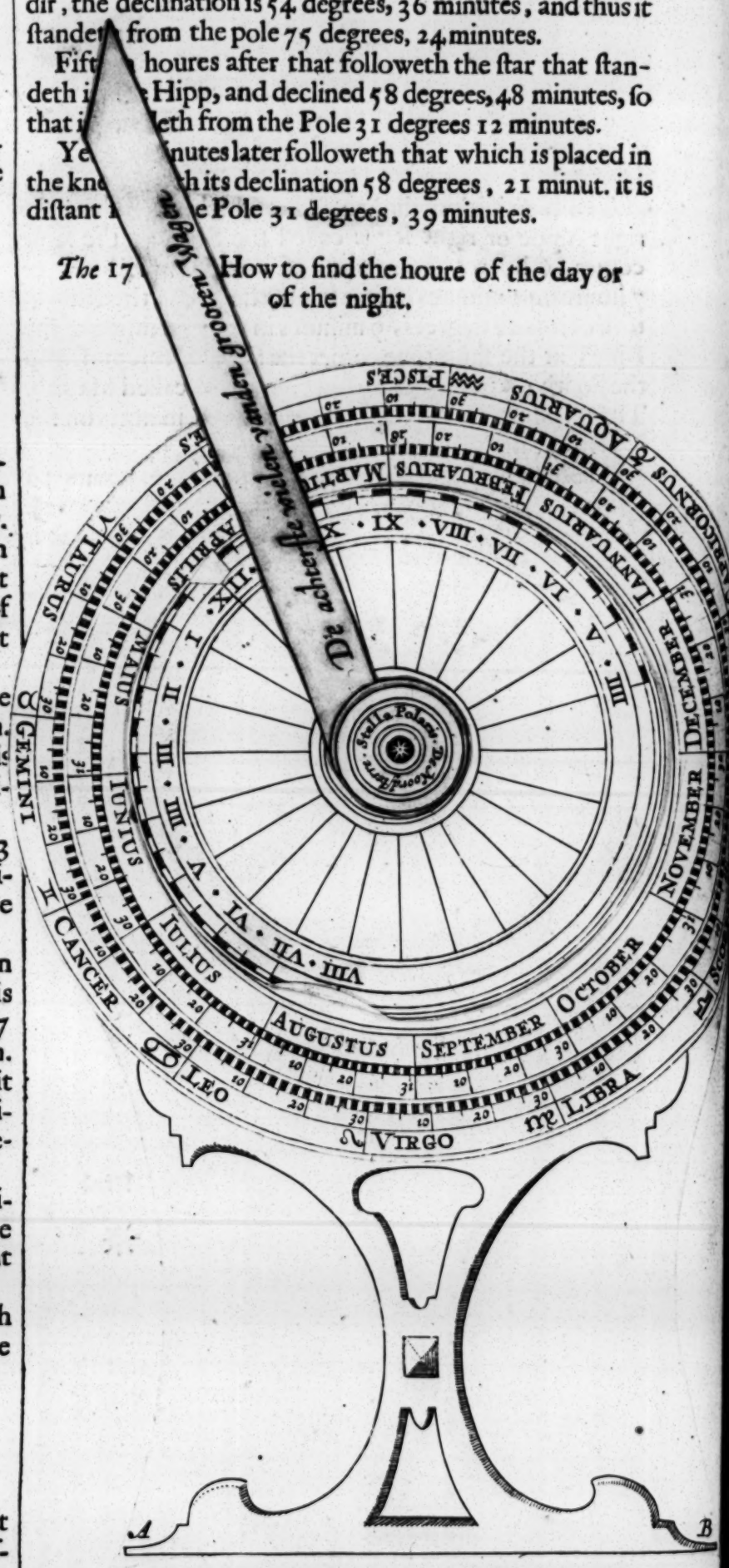
The Image of Cassiopeia sheweth it self beneath the Pole in this proportion, the first Star standing in the Chaire commeth into the north to the highest 6 houres, 36 minutes before the great Dogge, the declination of it is 57 degrees, 12 minut. to the north, and therefore 38 degrees 48 minutes.

Half an houre after followeth the Brest named Schedir, the declination is 54 degrees, 36 minutes, and thus it standeth from the pole 75 degrees, 24 minutes.

Fift[illegible] houres after that followeth the star that standeth i[illegible] Hipp, and declined 58 degrees, 48 minutes, so that i[illegible]eth from the Pole 31 degrees 12 minutes.

Ye[illegible]nutes later followeth that which is placed in the kn[illegible]h its declination 58 degrees, 21 minut. it is distant [illegible]e Pole 31 degrees, 39 minutes.

The 17 How to find the houre of the day or of the night.



To finde the houre of the day at any hight, will bee done most readily and certainely with such a water compas, as is described in the Chapter of the ebbing & flowing of the Sea; in the night one may finde it by the night-diall, as this Figure above describeth, which hath two rondels; the one moveable, the other immoveable, in the lowest which is immoveable are the 12 signes of heaven placed is also the moneths and dayes of the yeare. On the moveable

moveable roundel are the houres, this turnes with the gnomen, whose right side answereth to the middle point where there must be a nayle with a hole, through which a man may see. The use of this night diall is this: We set first the foot to the twelfth houre on the moveable roundel, and to the day of the yeere, on the undermost unmoveable roundel, and set the Instruments hight, with the lowest corner of the foot A B, so that it stand water-pas, in such sort, that a man may see the North-star through the hole of the nayle, turning the diall up and downe, so long till the hinder wheeles of the great Wagon come into the diall, which being so, the gnomen shall shew the houre on the moveable roundel. And if in place of the hinder wheels of the Wagon you take the brightest of the watchtmen, it will be 4 hour. 15 minut. later, as the diall will shew, because the wheeles aforesayd of the great cart goe so much before the wayters.

Men may finde the houre by the ascension of the Sunne and the Starres in this manner; when we see any Star in the South, whose just ascension is knowne, and that we know the true ascension that day, then draw the ascension of the Sunne from the ascension of the Star, the remainder we devide into houres by 15, (for 15 degrees make 1 houre) and this wil be the right houre of the time, but if the ascension of the Sunne be more then the Stars, in that cause you shall add 360 degrees to the ascension of the Star, and then to as aforesayd.

I. Example.

On the 10 of April, in the evening, in the south, I se the heart of the Lyon, whose right ascension is 147 degr. the ascension of the Sunne on that day is 19 degrees, take those from the ascension of the star, there remaines 128 degrees, and these devided by 15, I finde 8 houres, 8 degrees over plus, and for as much as 15 degrees make one houre, every degree will make 4 minutes, the 8 degrees over plus, make 32 minutes of an houre, it will be then at that time 8 houres, 32 minutes from the noone tyde.

II. Example.

On the 5 of November in the night I finde in the south the Star Aldebaran, the south eye of the Bull, whose right ascension is 64 degrees: the Sunnes right ascension on that day 220 degrees, which is more then that of Aldebaran, therefore I add to the ascension of the Star 360 degrees, it makes 424 degrees, the Sunnes right ascension being taken from this, there remains 204 degr. which is the difference betweene the ascension of the Sunne and the Star aforesaid, which being devided by 15 you shall finde 13 houres, 8 degrees, which make 36 minutes, it is then 13 houres 36 minutes from the noone tyde, that is 1 houre, 36 minut. after midnight.

How to finde the ascension on any day in the yeare of the Sunne and the Stars, we have here adjoyneth 2 tables, the one of the Sunne, showing from 5 dayes to 5 dayes the Sunnes ascension, out of which you may easily finde the same in other dayes. The other for thirtie of the primest fixed Starres, both of them onely by degrees, that being sufficient for this businesse.

The 18 Point. A Table of the right ascensum of the Sunne.

The first number in the table shewed the day of the moneth, the second of degrees of the ascension, of the Sunne on that day.

Janu.		Febr.		Mart.		April.		May.		Juni.	
da.	deg.	da.	deg.	da.	deg.	da.	deg.	da.	deg.	da.	deg.
5	287	5	319	5	346	5	14	5	42	5	73
10	292	10	324	10	351	10	19	10	47	10	78
15	297	15	329	15	355	15	24	15	52	15	83
20	303	20	334	20	360	20	28	20	57	20	88
25	308	25	339	25	4	25	33	25	62	25	94
31	314	28	342	31	10	30	38	31	68	31	99

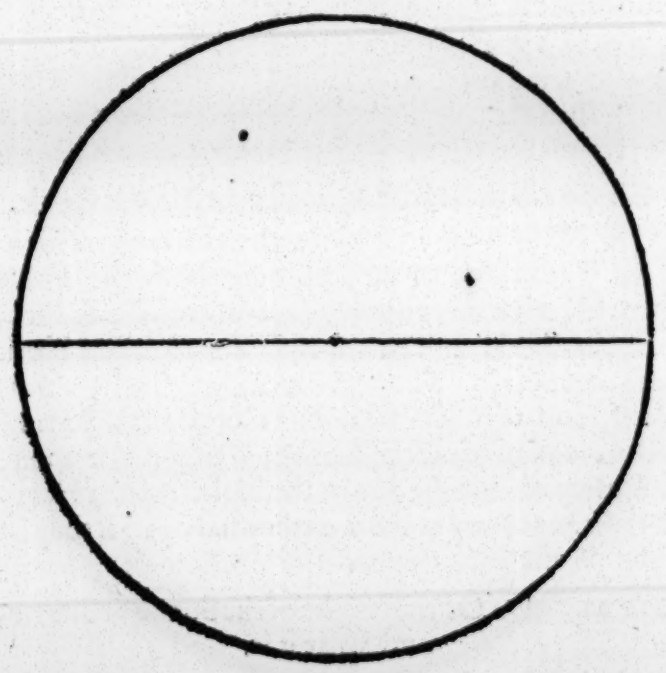
Julius		Augu.		Septe.		Octo.		Nove.		Dece.	
da.	deg.	da.	deg.	da.	deg.	da.	deg.	da.	deg.	da.	deg.
5	104	5	135	5	164	5	191	5	220	5	251
10	109	10	140	10	168	10	195	10	225	10	257
15	114	15	145	15	173	15	200	15	231	15	263
20	119	20	149	20	177	20	205	20	236	20	268
25	124	25	154	25	182	25	210	25	241	25	274
31	130	31	159	30	187	31	215	30	246	31	281

A Table of the right ascension of the primest Starres.

The Girdle of Andromeda,	12 degrees
The cleerest in the head of the Ram.	27 degrees
Menkar the brightest in the mouth of the Whale	41 degr.
Aldebaran, the south eye of the Bull.	64 degrees
Capella in the left shoulder of Erichtonius.	72 degrees
Regel the left foot of Orion.	74 degrees
The Star in the left shoulder of Orion.	84 degrees
Syrius the great Dogge.	97 degrees
The North head of Gemini.	180 degrees
The South head of Gemini.	111 degrees
Procyon the little Dogge.	110 degrees
The brightest in the watersnake, Cor Hydræ.	137 degrees
Regulus the Heart of the Lyon.	147 degrees
The tayle of the Lyon.	172 degrees
Vendemiatrix the right wing of Virgo.	191 degrees
Spica Virginis the eare of corne.	196 degrees
Arcturus the brightest in Bootes.	210 degrees
Arcturus the brightest in Bootes.	218 degrees
The South Waight.	210 degrees
The north Waight.	224 degrees
The brightest in the North Crowne.	230 degrees
Antares, the Hart of the Scorpion	242 degrees
The Head of Hercules.	254 degrees
The Head of Serpentarius.	259 degrees
The tayle of the Eagle.	282 degrees
Vultur the cleerest in the Eagle.	293 degrees
The Star in the mouth of the horse Pegasus.	321 degrees
Formohant the brightest in the end of Aquarius.	339 degr.
Marcab the sack or foot of Pegasus.	342 degrees
The uttermost in the wing of Pegasus.	358 degrees
The most Northerly in the Whales tayle.	360 degrees

The 19 Point. Of the Horizon, or the Circle that boundeth the sight.

WHere the heavens & the earth or the waters seeme in our sight to meete together, that is called the Horizon, or the Circle bounding the sight, because our sight endeth there, & can go no further by our Netherland Seafarers, it is also called the Kimmen. This circle devideth the heavens just in two even parts, so that just the one halfe is seene by us here above, and the other halfe can not be seene by us, because it is hidden underneath us, which happeneth in this manner. The earth, (as in the first chapter is shewed) standeth as a center in the middle of the heavens, the



The first of the three in the Girdle, which are called the three Kings, goe one houre 16 minutes before Syrius into the south; the declination of it is 36 minutes in the Southside of the Line.

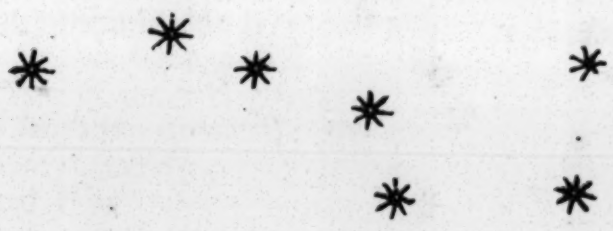
Foure minutes after commeth the second or middlemost into the South; the declination is 1 degr. 27 min.

Nine minutes after the first commeth the last or third of the three Kings into the South, and hath his declination in the Southside of the Line 2 degr. 10 minut.

These three Kinges stand alwayes and appeare a little above the great Dogge, whereby they are easily knowne.

Here doe follow some Starres which show themselves in the North, and therefore by some men may are called Northstares.

The Stares of the great Coach or Wagon, very serviable and fitt for those that sayle farre towards the



South; they come in the time here following specified unto their highest, the hinder weeles come intho the North to their highest after Syrius or the great Dogge 4 hour. 12 minutes, the most Northern hath his declination from the Equinoctiall 63 degrees, 41 minutes, and is distant from the Pole 26 degrees, 19 minutes; the declination of the Southermost is 58 degrees, 18 minutes, it is distant from the Pole 31 degrees, 42 minutes.

The Southermost of the forewheeles comes into the North to his highest right over the Pole 5 houres, 5 min. after the great Dogge is past the South; his declination is 55 degr. 42. min. in the Northside of the Line, and is distant from the Pole 34 degrees, 18 minutes.

The most Northern in the fore wheele followeth 23 minut. after, and then commeth to his highest; the declination of it is 59 degrees, 1 minute, and it standeth above the Pole 30 degrees, 59 minutes.

The Horse the next to coach commeth to its highest in the North, 6 houres, 8 minutes, after the great Dogge is gone through the South; it declineth to the North 57 degrees, 57 min. is distant from the Pole 32 degr. 3 min.

The middlemost Horse comes halfe an houre after it to the highest; the declination of it is 56 degrees, 50 minutes, therefore it standeth distant from the Pole 33 degrees, 10 minutes.

The uttermost Horse of the coach cometh to the highest 7 houres, 7 minut. after Syrius is past through the South, the declination of it is 51 degr. 9 minut. it is distant from the Pole 21 degr. 51 minutes.

The middlemost and brightest of the waiters declineth to the north 75 degr. 43 minutes, is distant from the Pole 14 degr. 17 minutes.

NOTA.

Touching the north Starre her declination, and how it is to be used, with the watchmen is decliniated in the discourse following.



The Dragons head is formed as this figure declareth, the star most southerly is the clearest, and cometh to the highest in the north 11 houres and 5 min. after that Syrius is past the South, the declination is 51 degr. 37 minut. in the northside of the Line; standeth from the Pole 38 degrees 23 minutes.



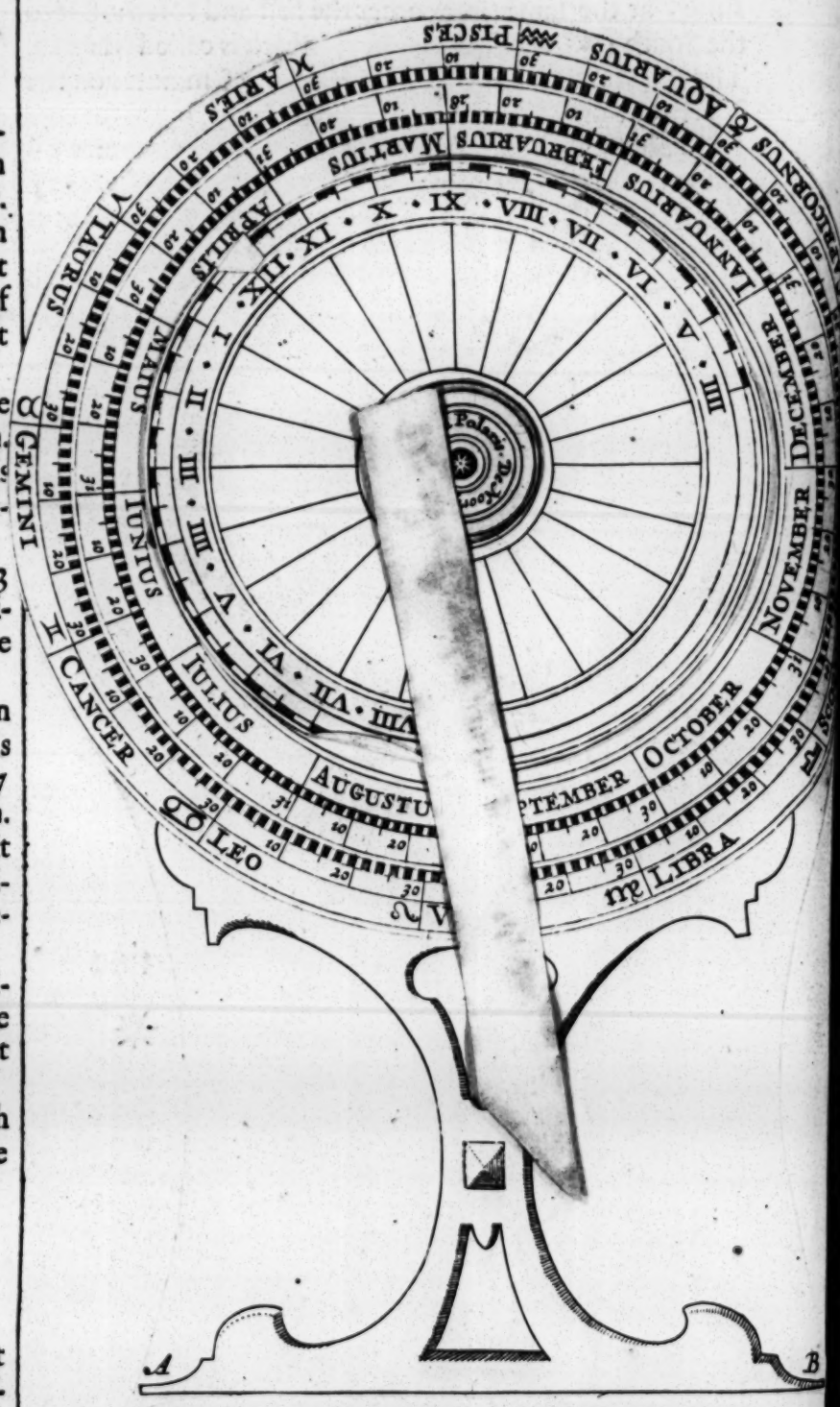
The Image of Cassiopeia sheweth it self beneath the Pole in this proportion, the first Star standing in the Chaire commeth into the north to the highest 6 houres, 36 minutes before the great Dogge, the declination of it is 57 degrees, 12 minut. to the north, and therefore 38 degrees 48 minutes.

Half an houre after followeth the Breast named Schedir, the declination is 54 degrees, 36 minutes, and thus it standeth from the pole 75 degrees, 24 minutes.

Fifteen houres after that followeth the star that standeth in the Hipp, and declined 58 degrees, 48 minutes, so that it standeth from the Pole 31 degrees 12 minutes.

Yet 27 minutes later followeth that which is placed in the knee, hath its declination 58 degrees, 21 minut. it is distant from the Pole 31 degrees, 39 minutes.

The 17 Point. How to find the houre of the day or of the night.



To finde the houre of the day at any hight, will bee done most readily and certainely with such a water compas, as is described in the Chapter of the ebbing & flowing of the Sea; in the night one may finde it by the night-diall, as this Figure above describeth, which hath two rondels; the one moveable, the other immoveable, in the lowest which is immoveable are the 12 signes of heaven placed is also the moneths and dayes of the yeare. On the moveable

moveable roundel are the houres, this turnes with the gnomen, whoſe right ſide anſwereth to the middle point where there muſt be a nayle with a hole, through which a man may ſee. The uſe of this night diall is this: We ſet firſt the foot to the twelfth houre on the moveable roundel, and to the day of the yeere, on the undermoſt unmoveable roundel, and ſet the Inſtruments hight, with the loweſt corner of the foot A B, ſo that it ſtand water-pas, in ſuch ſort, that a man may ſee the North-ſtar through the hole of the nayle, turning the diall up and downe, ſo long till the hinder wheeles of the great Wagon come into the diall, which being ſo, the gnomen ſhall ſhew the houre on the moveable roundel. And if in place of the hinder wheels of the Wagon you take the brighteſt of the watchtmen, it will be 4 hour. 15 minut. later, as the diall will ſhew, becauſe the wheeles aforeſayd of the great cart goe ſo much before the wayters.

Men may finde the houre by the aſcenſion of the Sunne and the Starres in this manner; when we ſee any Star in the South, whoſe juſt aſcenſion is knowne, and that we know the true aſcenſion that day, then draw the aſcenſion of the Sunne from the aſcenſion of the Star, the remainder we devide into houres by 15, (for 15 degrees make 1 houre) and this wil be the right houre of the time, but if the aſcenſion of the Sunne be more then the Stars, in that cauſe you ſhall add 360 degrees to the aſcenſion of the Star, and then to as aforeſayd.

I. Example.

On the 10 of April, in the evening, in the ſouth, I ſe the heart of the Lyon, whoſe right aſcenſion is 147 degr. the aſcenſion of the Sunne on that day is 19 degrees, take thoſe from the aſcenſion of the ſtar, there remaines 128 degrees, and theſe devided by 15, I finde 8 houres, 8 degrees over plus, and for as much as 15 degrees make one houre, every degree will make 4 minutes, the 8 degrees over plus, make 32 minutes of an houre, it will be then at that time 8 houres, 32 minutes from the noone tyde.

II. Example.

On the 5 of November in the night I finde in the ſouth the Star Aldebaran, the ſouth eye of the Bull, whoſe right aſcenſion is 64 degrees: the Sunnes right aſcenſion on that day 220 degrees, which is more then that of Aldebaran, therefore I add to the aſcenſion of the Star 360 degrees, it makes 424 degrees, the Sunnes right aſcenſion being taken from this, there remains 204 degr. which is the difference betweene the aſcenſion of the Sunne and the Star aforeſaid, which being devided by 15 you ſhall finde 13 houres, 8 degrees, which make 36 minutes, it is then 13 houres 36 minutes from the noone tyde, that is 1 houre, 36 minut. after midnight.

How to finde the aſcenſion on any day in the yeare of the Sunne and the Stars, we have here adjoyneth 2 tables, the one of the Sunne, ſhowing from 5 dayes to 5 dayes the Sunnes aſcenſion, out of which you may eaſily finde the ſame in other dayes. The other for thirtie of the primeſt fixed Starres, both of them onely by degrees, that being ſufficient for this buſineſſe.

The 18 Point. A Table of the right aſcenſum of the Sunne.

The firſt number in the table ſhewed the day of the moneth, the ſecond of degrees of the aſcenſion, of the Sunne on that day.

Janu.		Febr.		Mart.		April.		May.		Juni.	
da.	deg.	da.	deg.	da.	deg.	da.	deg.	da.	deg.	da.	deg.
5	287	5	319	5	346	5	14	5	42	5	73
10	292	10	324	10	351	10	19	10	47	10	78
15	297	15	329	15	355	15	24	15	52	15	83
20	303	20	334	20	360	20	28	20	57	20	88
25	308	25	339	25	4	25	33	25	62	25	94
31	314	28	342	31	10	30	38	31	68	31	99

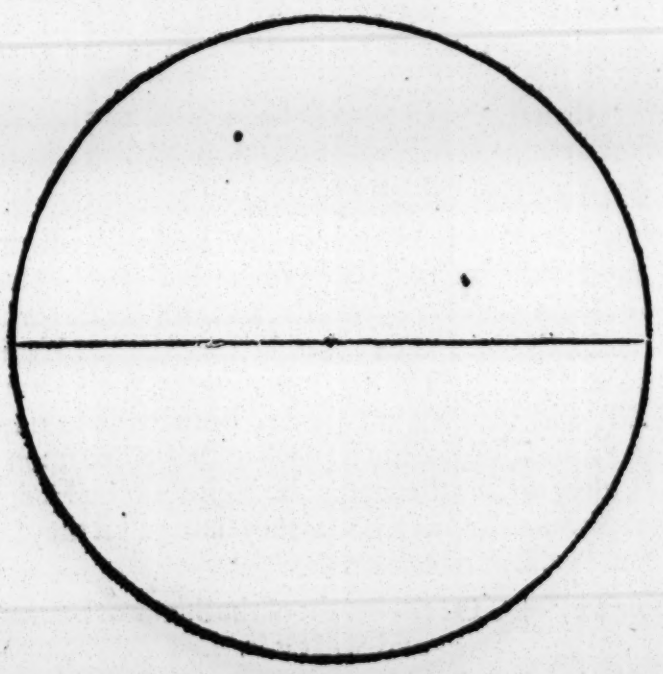
Julius		Augu.		Septe.		Octo.		Nove.		Dece.	
da.	deg.	da.	deg.	da.	deg.	da.	deg.	da.	deg.	da.	deg.
5	104	5	135	5	164	5	191	5	220	5	251
10	109	10	140	10	168	10	195	10	225	10	257
15	114	15	145	15	173	15	200	15	231	15	263
20	119	20	149	20	177	20	205	20	236	20	268
25	124	25	154	25	182	25	210	25	241	25	274
31	130	31	159	30	187	31	215	30	246	31	281

A Table of the right aſcenſion of the primeſt Starres.

THe Girdle of Andromeda,	12 degrees
The cleareſt in the head of the Ram.	27 degrees
Menkar the brighteſt in the mouth of the Whale	41 degr.
Aldebaran, the ſouth eye of the Bull.	64 degrees
Capella in the left ſhoulder of Erichtonius.	72 degrees
Regel the left foot of Orion.	74 degrees
The Star in the left ſhoulder of Orion.	84 degrees
Syrius the great Dogge.	97 degrees
The North head of Gemini.	180 degrees
The South head of Gemini.	111 degrees
Procyon the little Dogge.	110 degrees
The brighteſt in the waterſnake, Cor Hydræ.	137 degrees
Regulus the Heart of the Lyon.	147 degrees
The tayle of the Lyon.	172 degrees
Vendemiatrix the right wing of Virgo.	191 degrees
Spica Virginis the eare of corne.	196 degrees
Arcturus the brighteſt in Bootes.	210 degrees
Arcturus the brighteſt in Bootes.	218 degrees
The South Waight.	210 degrees
The north Waight.	224 degrees
The brighteſt in the North Crowne.	230 degrees
Antares, the Hart of the Scorpion	242 degrees
The Head of Hercules.	254 degrees
The Head of Serpentarius.	259 degrees
The tayle of the Eagle.	282 degrees
Vultur the cleareſt in the Eagle.	293 degrees
The Star in the mouth of the horſe Pegaſus.	521 degrees
Formohant the brighteſt in the end of Aquarius.	339 degr.
Marcab the ſack or foot of Pegaſus.	342 degrees
The uttermoſt in the wing of Pegaſus.	358 degrees
The moſt Northerly in the Whales tayle.	360 degrees

The 19 Paint. Of the Horizon, or the Circle that boundeth the ſight.

WHere the heavens & the earth or the waters ſeeme in our ſight to meete together, that is called the Horizon, or the Circle bounding the ſight, becauſe our ſight endeth there, & can go no further by our Netherland Seafarers, it is alſo called the Kimmen. This circle devideth the heavens juſt in two even parts, ſo that juſt the one halfe is ſeene by us here above, and the other halfe can not be ſeene by us, becauſe it is hidden underneath us, which happeneth in this manner. The earth, (as in the firſt chapter is ſhewed) ſtandeth as a center in the middle of the heavens, the



the which by reaſon of the unmeaſurable quantitie or largenes thereof, is ſo farre ſeparated from the earth, that the whole thickneſſe of the Earth in reſpect of the heavens, is no more then a point or prick, or at leaſt ſo little that it cannot be perceived by our ſight and that which by our ſight, along upon the Earth or the Water we can comprehend, (wich can not reach further then about three Dutch miles, that is 10 Engliſh myles) ſeemeth in our eyes by reaſon of the ſpace ſo little, to be no other then an halfe Globe falling perpendicular upon a plaine, ſo that our ſight falleth in the heaven, as if we ſtood in the middle point of the world, and ſawright compaſſe wiſe, whereby it falleth out, that juſt the halfe of the Heaven is ſeene by us, and the other halfe is not ſeene by us, in like manner as if a man ſhould lay a line over the center of a Circle, then the one halfe of the Circle is above, and the other halfe is juſt under. All the heavenly light, as the Sunne, Moone, and Starres (by the turning of the heavens) comming above the Horizon, are ſeene by us, and going downe under it, goe out of our ſight.

The Zenith is the poynt of the heavens directly over our head, and is on all ſides equally diſtant from the Horizon, it is alſo called the Pole of the Horizon.

An Explication.

The Horizon is too bee conſidered in a two-fold manner: according to the true and the viſible, the true goeth every way right waterpaſſe from our ſight, that is paſſeth through the Center of the Sphere, as is ſayd, deviding it into equall parts, is every way from the Zenith 90 degrees the juſt fourth parts of a Circle.

The Viſible is the uttermoſt part of the Earth or Water, that our eye can reach or ſee, when our eye is juſt on the flatt or ſurface of the even Water, then the true and viſible Horizon are one and the ſame, but our eye lifted up above the ſurface of the Water, the ſight falleth (over the Globe of the earth) every where lower then water-paſſe, and thence it followeth that the viſible Horizon is lower then the true, although this be not much materiall in the Art of Navigation, for as much as it is recompenced by the refraction of the viſible Horizon. We have added this table, for thoſe that deſire to be exact, where men may ſee how much the viſible differs from the true that being changed or altered by feet.

The eye being elevated above the water.	The viſible Horizon is lower then the trues.
foote.	minutes.
2	1
4	2
8	3
14	4
20	5
27	6
37	7
39	8
53	9
66	10
82	11
100	12
104	13
163	14
186	15

Example.

THe ſight being elevated above the ſurface of the waters 14 feet, in the 1 Columne, in the 2 Columne over againſt it, you find 4 min. which the viſible Horizon is lower then the true. The ſight being lifted 140 feet about the Horizon, the viſible wil be 13 mi. lower then the true.

The 20 Point. Of the Meridian or Middle Circle.

THe Meridian is a Circle in the Heavens, which we muſt conceive to paſſe through both the Poles of the world, right over our heads, and croſſe wiſe through the Equinoctiall, and to cut right through the Horizon North and South. The Sun touching this Circle is at the higheſt, and then it is juſt noone, or the middle time of the day, and likewiſe the ſtars when they come upon this Circle, they are like the Sun) at the higheſt of the Horizon, and right South and as ſoone as they have paſt it they begin to goe downe ward againe.

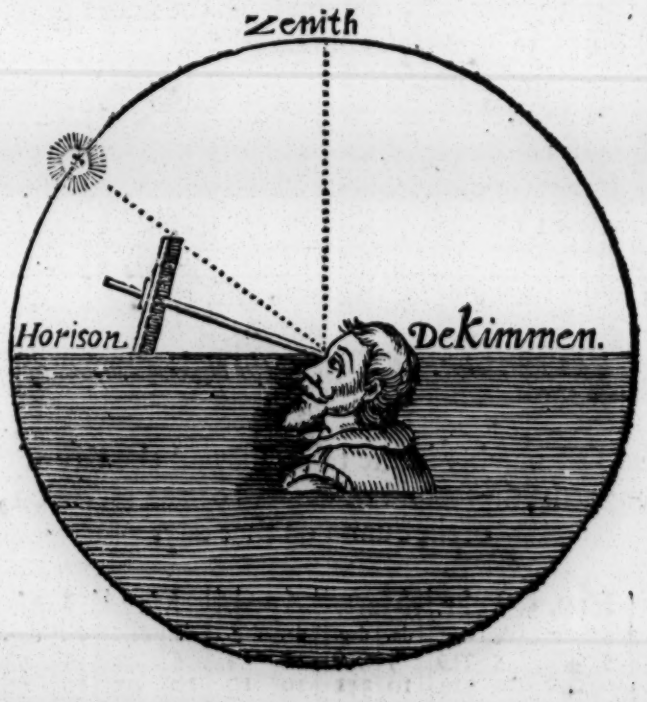
The 21 Point. Of the height of the Sunne or Starres, and what it is.

THe height of the ſunne or Starres is nothing elſe but the diſtance or ſpace that is between the Horizon and the Sun or Starre it ſelfe: which to underſtand perfectly, you muſt make, that we ſuppoſe a point or prick to be right above our heads in the Heavens, that is equally diſtant from the Horizon in all places, which point is called the Zenith, or the head point: now ſeeing that the whole circuit of the heavens containeth 360 degrees and that the juſt halfe thereof is ſeen above the Horizon, it is certaine that this point called the Zenith in all places is above the Horizon 90 degr. whether you turn eaſt, weſt north or ſouth or any other way: now when the Sun riſeth above the Horizon, and aſcendeth higher and higher from it, and commeth toward this point or Zenith: we ſay that as many degrees as it aſcended, from the Horizon towards the aforeſaid point or Zenith, that the ſame is the height thereof, as by example, when he is riſen halfe up from the Horizon towards the Zenith, then he is 45 degrees and if he be riſen a third part from the Horizon then he is 30 degr. high, and ſo forth, the like is alſo to be underſtood of the height of the Stars.

The 22 Point. How to meaſure or find the height of the Sun or of the Starres.

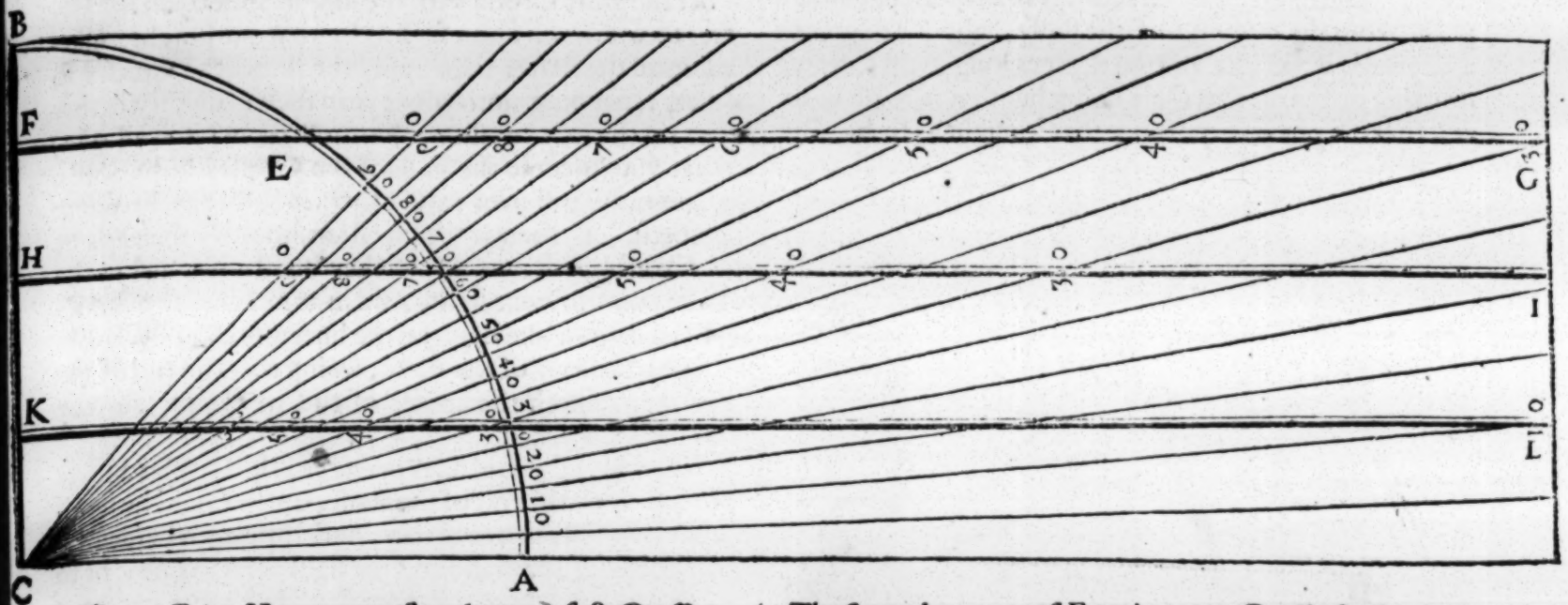


TO find the height the Mathematicians have deviſed divers fit Inſtruments, whereof there are two that are moſt uſed at ſea, which are the Aſtrolabium, and the common Croſſe-ſtaffe, the uſe of the Aſtrolabium is plaine and well known unto all men: for holding the inſtrument by the ring, let the Sun ſhine through the holes of the eares, the uttermoſt part of the Diall (counting from below upwards ſheweth how many degrees the Sun is riſen above the Horizon: as the former figure plainly ſheweth.



The Croſſe-ſtaffe is uſed thus, you muſt place the end of the Staffe underneath the eye, then you muſt remove the

the Croſſe too and fro, untill the upper end of the Croſſe ſtandeth even upon halfe the Sun or Star, and the under end juſt with the Horizon, and then the Croſſe will ſhew you upon the ſtaffe, how many degrees they are in height, ſo you account after thoſe numbers whereof ninety ſtand that the end of the ſtraffe that is next to your eye, the computation going backward from the other end of the ſtaffe: for otherwiſe if you reckon by thoſe numbers that proceed forward from the end next your eye, then it will ſhew you how many degrees the Sun or Star ſtandeth from the Zenith, or Head point of the Horizon, as you may ſee by the figure enſuing.



The 23 *Point.* Hou you muſt make a perfect Croſſe-ſtaffe, and how you ſhall marke it.

The Croſſe ſtaves are oftentimes made the one after the other by imitation, or patterns, and that many times without judgement or knowledge whether the pattern bee good or not, whereof notwithſtanding a man ought to bee very certaine, for it is a matter of great importance and therfore I have here ſet downe two ſeverall wayes eaſie to be underſtood, how to make the ſame exquiſitely and perfectly upon good reaſon & good ground.

Make an even ſmooth board, and paſte good paper upon it, then draw a ſtrait line upon one edge or ſide thereof, as you ſee in this figure a line marked C A D, then marke another line as you ſee it marked B C, that B C A bee a right and juſt halfe ſquare, then take a good paire of Compaſſes, and ſet one foot thereof in the angle marked C, and compas there with as you ſee B E A, ſo that A E B may bee a right quadrant, or fourth part of a Circle, then devide it into two parts, to E, and then devide the other halfe (which is A E) into 90 parts, or degrees as thus: firſt devide it into 3 parts, and then devide each 3 parts again into 3, and then it wil be divided into 9 parts, which done, devide each of them into two parts, and thoſe diviſions or parts divide into 5 parts, and then it will bee divided into 90 parts: then take a ſtraight line: and lay the one end thereof upon the Center C, and ſo forth upon every ſeverall point, which you have divided in the Quadrant, and then draw lines from the Center C through all the foreſaid points, as long as the board will containe them, as you may ſee in this figure: which done then your inſtrument is fully made and prepared to marke your ſtaves there upon. Which to doe, with your compaſſes take juſt the half length of your Croſſe, and ſet the one foot thereof in the Center, and put the other at F, and doe the like from D right to G, which two points or pricks draw with a ſtraight line unto each other as you ſee in the line F and G, and then mark where the line F G is cut through by the lines that come out of the Center through the degrees or points of the quadrant: for thoſe cuttings through, ſhew upon the ſaid line the right marking of your Croſſe-ſtaffe: that is, you muſt marke your Staffe juſt as you ſee that theſe lines in F G are marked, by the lines that come out of the center and paſſe through it, whether the Croſſe bee long or ſhort, you muſt follow the ſame order that you are taught in the figure, the line H I is drawne for a ſhorter Croſſe then the former, and K L for one that is ſhorter then that, viz whoſe halfe is juſt ſo long as the Line C K.

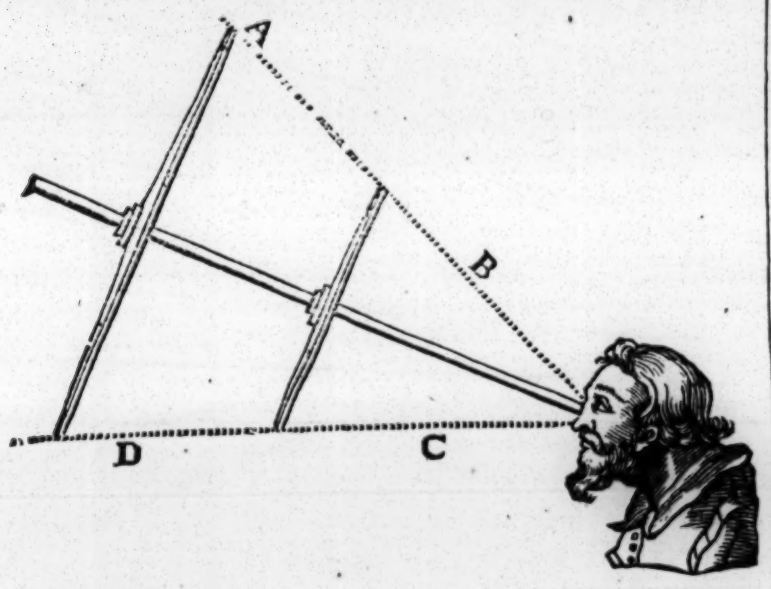
The ſecond manner of Framing your Croſſe-ſtaffe much excelleth the firſt in perfection and curioſity, ſo you divide it perfectly with your Compaſſes, which is done in this manner. Upon an hard even board which is paſted with paper draw a ſtraight line as long as your ſtaffe is, and with point compaſſe take the juſt halfe or the length of your Croſſe, whereunto you mean to mark your ſtaffe, and prick it many times along in the ſaid line as you can: & divide each of the ſaid lengths into 11000 equall parts, then look upon the table here after inſuing, which ſhewed you how many of thoſe points or parts you ſhall marke for each degree, and that you muſt doe in manner following, from the end of the ſtaffe, which you will make the eye end pricke juſt the halfe length of the Croſſe, and there make a Croſſe ſtroke, from whence prick for every degree ſo many of the aforeſaid parts as the table enſuing ſheweth you. As for example, for the firſt degree prick 176 parts, for the ſecond 355 parts, for the third 538 parts, for the fourth 724 parts, and ſo forth: Remembring that you muſt prick all the lengths of pricks or parts aforeſaid, from the aforeſaid croſſe ſtroke, which is marked upon the halfe length of the Croſſe into 11000 parts, then devide the whole Croſſe ſo, and then take for every degree halfe ſo many as the Table ſheweth unto you. And if you cannot doe ſo, devide halfe the Croſſe into a 1000 parts, and then leave the hindermoſt letter of the table out, as where you ſhould for the firſt degree take an 176 parts, take but 17 parts, leaving the laſt figure out: but if your croſſes be ſo ſmall that you can devide the halfe of them into no ſmaller then an hundred parts, then leave out the two laſt figures in the table. But you muſt underſtand that the more parts that you devide the croſſes into, your markes will fall out ſo much the better & perfecter.

de.	parts.	de.	parts.	de.	parts.	de.	parts.	de.	parts.
1	176	19	4019	37	10057	55	21716	73	56612
2	355	20	4281	38	10503	56	22708	74	61154
3	538	21	4550	39	10965	57	23759	75	65958
4	724	22	4826	40	11445	58	24874	76	71445
5	613	23	5108	41	11943	59	26059	77	77769
6	1106	24	5399	42	12460	60	27321	78	85144
7	1303	25	5697	43	12998	61	28667	79	93854
8	1504	26	6003	44	13558	62	30108	80	104301
9	1708	27	6318	45	14142	63	31663	81	117062
10	1918	28	6643	46	14751	64	33315	82	133007
11	2131	29	6976	47	15386	65	35107	83	153469
12	2349	30	7320	48	16051	66	37046	84	110811
13	2572	31	7675	49	16746	67	39152	85	219038
14	2799	32	8040	50	17475	68	41445	86	276362
15	3032	33	8418	51	18239	69	43955	87	371885
16	3270	34	8807	52	19042	70	46713	88	561810
17	3514	35	9210	53	19887	71	49758	89	1135891
18	3764	36	9626	54	20777	72	53137	90	infinit.

The

The 24 Point. Of the cutting of the Croſſe-ſtaffe, and how a man may helpe and prevent all the defects of the ſtaffe.

THere being a Croſſe-ſtaffe well and exquiſitely framed, according to the doctrine of the former Chapter: it falleth out, that certaine ignorant perſens cutoff a peece from the eye end of the ſtaffe, about a degree or a degree and a halfe, or two degrees long, and can give no other reaſon of that their doing but that it muſt be ſo, and that they have experience that it ought ſo to be. But



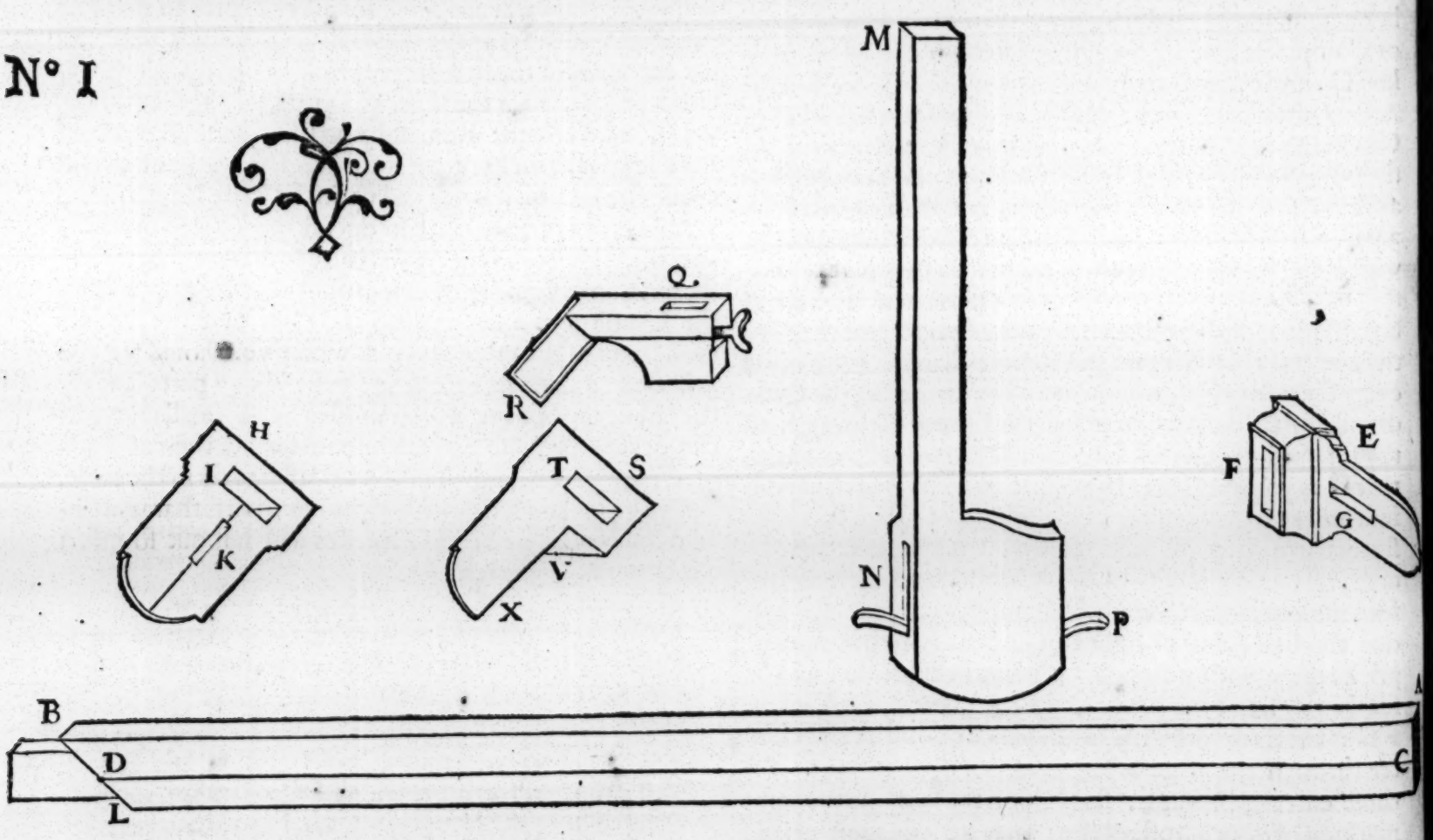
queſtionleſſe, ſeeing they prove by their experience that they doe not find their meaſuring with uncutt ſtaves perfect & right as it ſhould bee, the fault thereof, is not in the Croſſe ſtaves uncut, but in themſelves, for that they know not how to uſe the ſtaffe aright, nor underſtand the true ground thereof. Others that wil ſeeme wiſer then the former, give a reaſon thereof: to wit, that the ſtaffe muſt be cut, becauſe of the hollowneſſe of the eye, for that otherwiſe the ſtaffe cannot come to ſtand, ſo that the end thereof bee conjoyned to the middle point or center of the eye or ſight, this reaſon hath ſome ſhow of truth, but notwith ſtanding is alike untrue and erroneous: for the ſtaffe may very wel bee ſet, either on the innermoſt or outermoſt corner of the eye, ſo that the ſight of the eye may fall to anſwer juſt to the end of the ſtaffe: that this is truth we will prove with good reaſon as followeth.

Set the great Croſſe with the middlemoſt upon like degrees to wit, each upon ſuch as for that purpoſe are marked upon the ſtaffe: then apply the ſtaffe (the Croſſes ſo firmely remaining) unto your eye in ſuch manner (whether it bee on the innermoſt or outermoſt corner it is all one) as that you diſcerne the ends of the Croſſes both above and beneath, juſt over each other, in forme as this figure ſpecifieth. If then you draw ſtrait lines by the ends of the Croſſes A B and D C they ſhall meet juſt in the middle point of your ſight. And in as much as the Croſſes are placed upon like degrees, the lines aforeſaid ſhall meet juſt upon the end of the ſtaffe, ſeeing that the end of the ſtaffe repreſenteth the center of the quadrant whereby your ſtaffe is marked.

So then the aforeſaid lines or ends of the Croſſes anſwer both juſt upon the end of the ſtaffe, & alſo upon the ſight, ſo that it followeth neceſſarily, and appeareth evidently: that the end of the ſtaffe and the ſight meet in one; or to ſpeake properly, both of them ſtand juſt in the center of the quadrant.

Therefore whenſoever with the Croſſe ſtaffe you will take the height of the Sun, or of any Star, then obſerve diligently how many degrees it is elevated above the Horizon: and place the two croſſes upon ſo many degrees: then apply the ſtaffe to your eye in ſuch manner as that you may ſee the ends of the Croſſes juſt over each other, according as is taught before: in ſuch forme then as you finde the ſtaffe to ſtand to your eye ſhall you place the ſtaffe (taking away one of the Croſſes) when you deſire to meaſure according to ſuch height: this is a ſure rule which will never fayle, neyther can you poſſibly miſſe if you follow it.

N° I

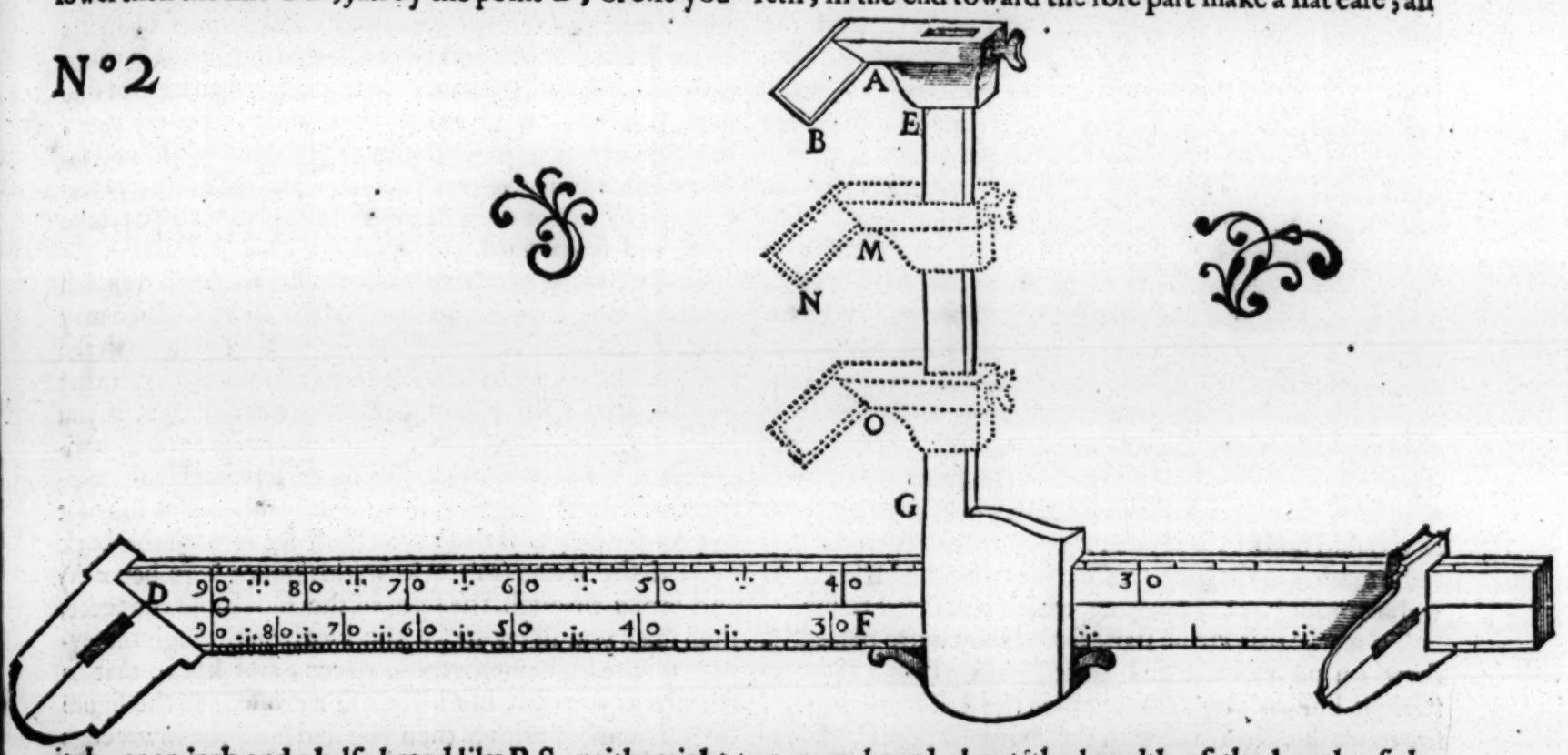


The 25 point. How to finde the height of the ſun by the ſhaddow.

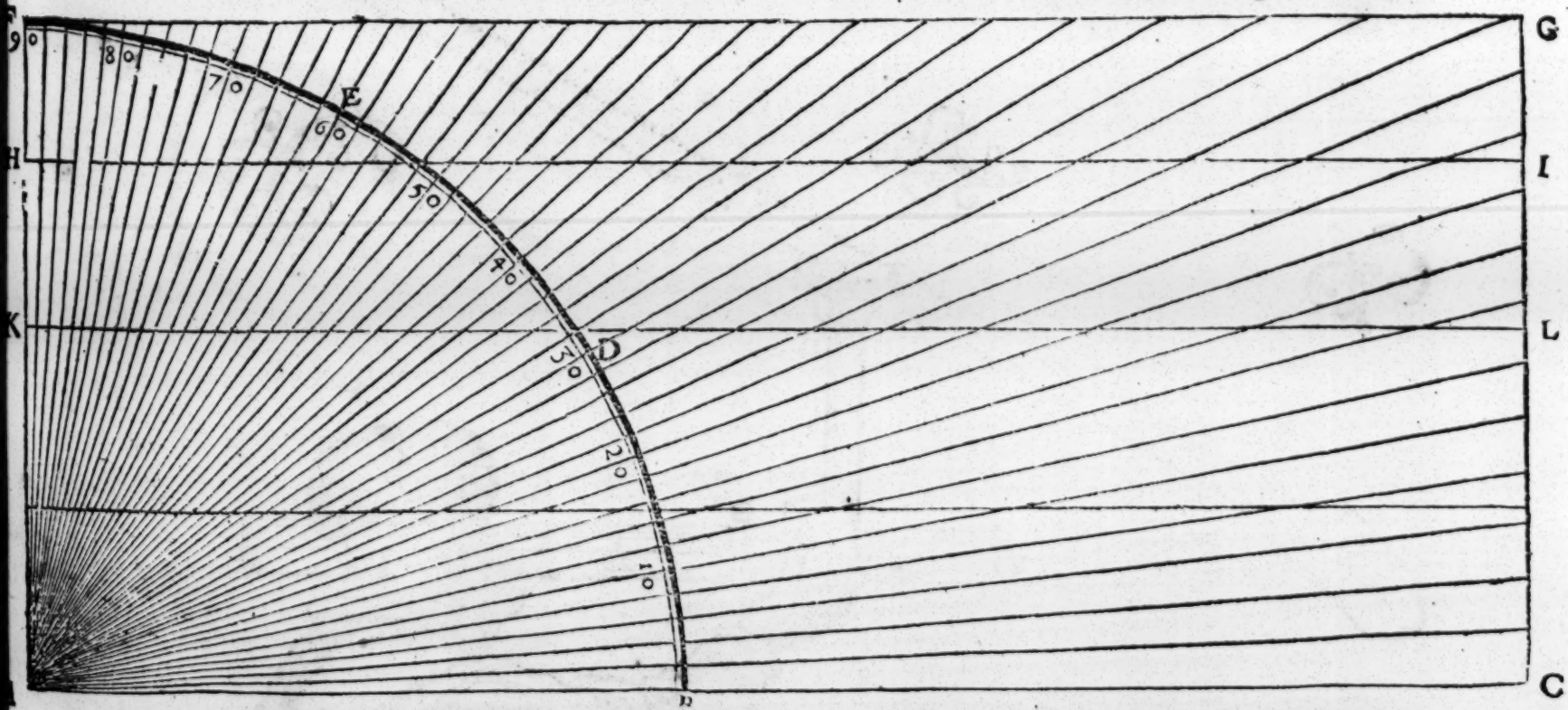
The common Croſſe ſtaffe is a very fit inſtrument to take the height at Sea, as well of the Sunne, as of other ſtars, but if the Sunne bee very high, wee cannot uſe it ſo commodiouſly, becauſe the eye can hardly indure the heath and brightneſſe of it. To avoid this, wee may very conveniently take the height of the Sun by the ſhaddow, in this manner: make a peece or ſtaffe 3 or foure feet long, very ſmooth, halfe a thumme thicke, broad two or 3 thummes, that it may remaine ſtraight, as you ſee in A B in the midſt of the broad ſide (juſt at the halfe betweene the upper and nether edge line, draw aright) C D, make

make a peece like E with a hole F, that it may be put into the peece A B and thruſt it to and fro, alſo thwart over let there be a ſmall hole for the eye like G, in ſuch ſort that when this ſliding peece is fitted to the other, the hole for the eye, may come to ſtand juſt by the middeſt of the line of the peece CD, neither higher nor lower. Make an other peece like H, and in the middeſt of the ſame alſo a hole for the eye like K, and an hole thwart like I, that ſo it may be put on the end of the ſtaffe at B, in ſuch manner that it ſtand not right, but thwart or corner wiſe, as the line B D L ſheweth, and that the hole K, may ſtand like the other eyehole G, on the peece E, neither higher nor lower then the line C D, juſt by the point D, or elſe you may in place of that eye hole, cut off the Croſſe of the lower edge to the line where the eye-hole ſtandeth, (as you may ſee in the Croſſe S) at the Line XV. make another Croſſe, a foot and a halfe or two foot long, in the forme of M N, with a hole at N, through which it being put into the foreſaid peece, that ſo you may ſlide it, to and againe, and that it may goe ſoftly and certaine on it, then make in the lower part of the hole a braſen ſcrue which may bee thruſt under againſt the peece and ſhuft it cloſe to O P. Laſt of all, make a ſmall Croſſe as Q, with an hole that it may be ſet on the long Croſſe M N and faſten it behinde with a ſcrue ſo high or low as uſe requireth, in the end toward the fore part make a flat eare, an

N°2



inch, or an inch and a halfe broad like R S, neither right nor flat but thwartwiſe or cornerwiſe, ſo that when all theſe parts are joyned together as they ought, the flat of that eare, and that thwart flat of the ſliding-peece H, may allway remaine at like diſtance, that is, that they make equall angles, or that they both may ſtand the one and the other out of the ſquare againſt the peece A B, the parts thus prepared, and joyned to each other, the forme of this Inſtrument will be like the figure which is marked N. 2. now to marke this ſtaffe fit for uſe doe thus, make an even board about the breadth of the length of the long croſſe, and as long as the peece A B, paeſt on good paper, in the one corner, draw a ſtraight line like this figure the line A B C, take a paire of compaſſe and ſet the one foot in the point A, and with the other make part of a circle, as wide as the board will permit, like B D E F; keepe the compaſſe open, and ſet one foot in B, and the other in the circle drawne, as farre as it will reach, as in E, divide the circle B E into equall parts in D, thruſt the white B D, or D E, from E, forward alongſt the circle to

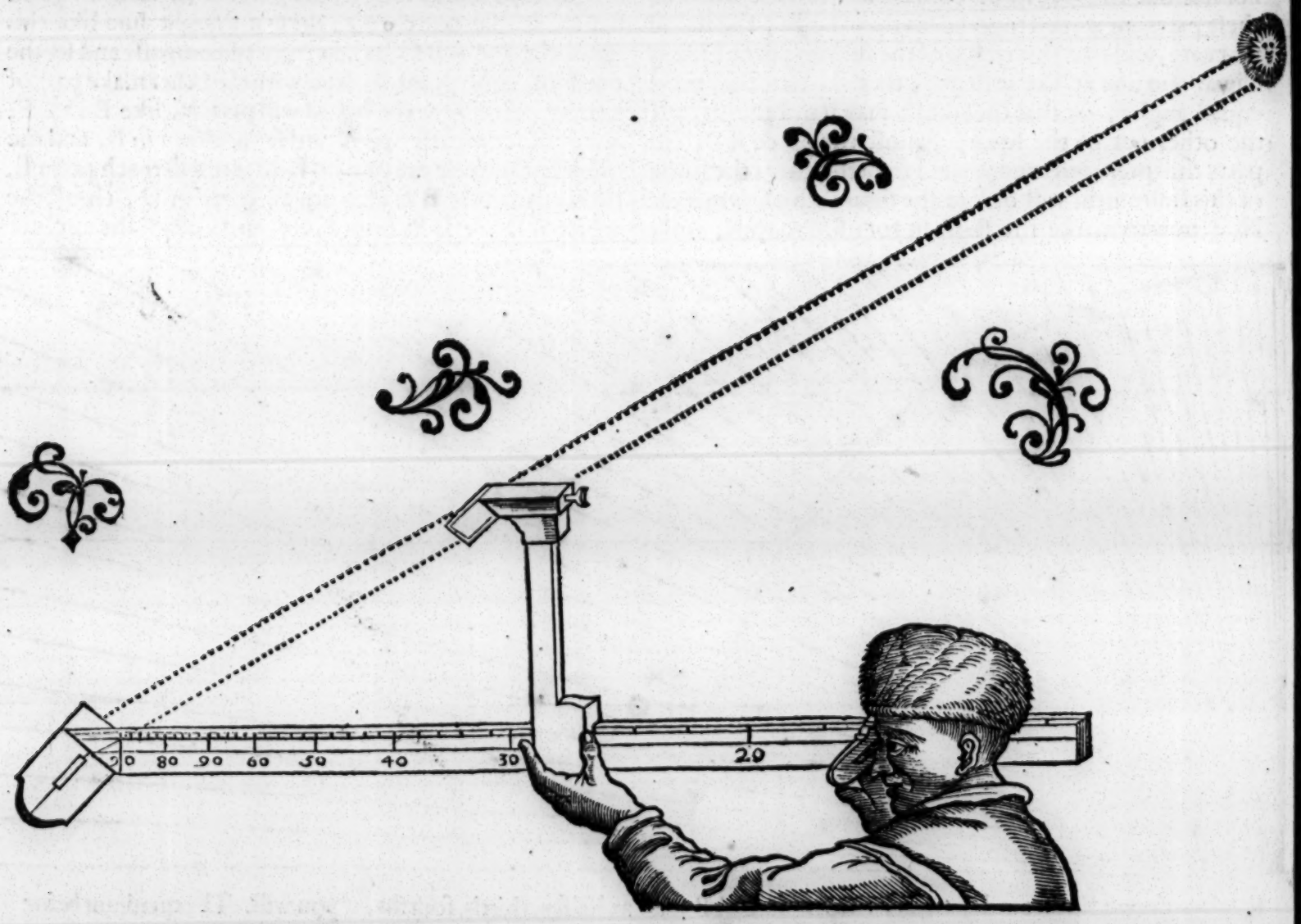


F, then draw a line from F, to A, the Angle F A B is a juſt triangle, and the bow B D E F is a juſt quadrant or fourth part of a circle, the parts B D, D E, E F, divide each in three parts, againe into five, ſoo ſhall the quadrant bee divided into 90 gr. You may divide into leſſe as halfes, thirds, fourths, if you will. The quadrant being thus divided, lay a ruler, on the end A, & the other end on the point of the other diviſions, & ſo draw lines from the point A, through al the other points, as long as they may ſtand on the board, as is to be ſeene in the figure above.

That being done, the preparation is made; to marke the peece, take firſt the juſt wideneſſe with a paire of compaſſes, that is betweene E G, the foremoſt edge of the long croſſe, and A B the outermoſt edge of the eare, in the little croſſe, as in the figure N°. 2. and put that on the peece of the point D, on the left roundell inward toward C, on that point draw a thwart line, from thence you ſhall begin to marke, that the wideneſſe betweene the middle line of the ſtaffe, and the under edge of the eare, which is in the uppermoſt croſſe, as in the foreſaid figure N. 2. from F tot A, prick that on the quadrant from A toward F in H, and from C to G in I, and draw the line H I. Then obſerve how all the lines comming from A the center of the quadrant, cutting through this line, even ſo muſt the peece bee marked beginning at the point C with 90, 80, 70, &c. But if ſo doing, you cannot get ſo many degrees on the ſtaffe, as you deſire to have (for your uſe) then ſet the little croſſe a third or fourth part lower toward the great croſſe at your pleaſere, ſo that the under edge of the eare A B in the figure N. 2. may come to ſtand at M N, then in the place of the length F A take F M, and thruſt it in the quadrant of A toward F into K, and from C unto L, and draw the line K L, that then will bee marked as it ought, by cutting the lines, comming from the center through the deviſion of the quadrant, but you muſt take a certaine marke in the long croſſe, for to ſet the little croſſe in ſuch manner as you would uſe both marking. But if you would make more markes on the ſame peece, you muſt ſlide that little croſſe more netherward and then doe as was ſaid before, but you may not forget to make certaine markes in the long croſſe, for to ſet the little croſſe wel according to the marking, which you deſire to uſe.

To marke this croſſe ſtaffe from tables more perfectly, draw on an even board paſted with paper a right or ſtraight line, as long or longer then the ſtaffe that you deſire to marke. You ſhall with the compaſſe take the wideneſſe of the ſtaffe, between the middle line, and the nethermoſt edge of the eare at the little croſſe, as it is in the figure N°. 2. F A or F M, or alſo F O, what marking ſoever you deſire to follow ſet that wideneſſe naken as often alongſt that foreſaid line as you can, and each of theſe lengths you ſhall divide in 1000 parts, this table in this place ſhewes how many of theſe parts you ſhall appoint for a degree, or a fourth part of a degree, beginning, as is the figure a foreſayd N°. 2. from the point C. The firſt Columne of the table ſheweth the degrees, the ſecond the min. the third the parts, which you muſt take for the degrees, and mi. for the firſt halfe degree or 30 min. 87 for a degree, 175. for 2 degr. 15 min. 393, but for 6 degr. 45 mi. 1184 parts; but if you cannot divide ſo ſmall a breadth as of F E, or F O, into 10000 parts, then you may divide it into halfe ſo many parts, and ſo you ſhall take ſo many parts for a degree, or part of a degree, if you cannot doe that, you ſhall devide it into 1000 parts, at every time, leaving out one letter in the table, as when you ſhould take for the firſt degree 175, take 17, and as neare, as you can one halfe, for the 8 degrees in the place of 1405, take 140, and ſo forward.

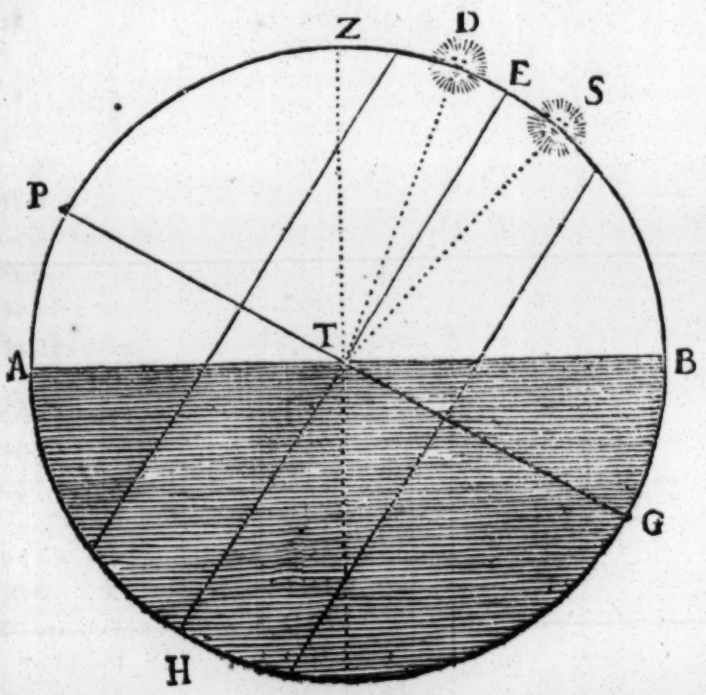
Laſtly, draw two parallel lines, on the leaſt roundell ſtanding on the outermoſt end of the ſtaffe, which may be perfectly ſeene, whereof the one muſt goe through the midſt of the eyhole as O P, the other ſo much higher that the breadth of the eare at the little roundell Q R if you make a good breadth betweene theſe two lines of like wideneſſe, it will be ſo much the more ſerviceable for uſe; this croſſe ſtaff being thus compleately made. The uſe of it to take the height is this: you ſhall ſet it with the back toward the Sunne (as you ſee in this figure here beneath) and looke through the ſight of the moveable runpeece, then ſhall you likewiſe ſee the Horizon through the eyhole of the leaſt unmoveable peece, and keepe that as ſtraight as you can, but if you uſe a croſſe as in the figure N°. 1. is marked with S. then you ſhal hold the lower edge V X right on the Horizon, as you doe in the common



croſſe ſtaffe. Then you ſhall ſlide with your hand the long croſſe to and fro upon the ſtaffe, untill the ſhaddow of the eare at the uppermoſt little croſſe fall into the open field, on the leaſt unmoveable thin peece on the end of the ſtaffe, juſt between the two parallel lines above the ſight hole, to wit in ſuch manner; that you may at once ſee the Hori-

Horizon through both the ſight holes, and the ſhaddow of the above-ſaid eare even above the two foreſaid parallel lines that being once obtained, the great croſſe will ſtand juſt by the degree of the true height of the Sunne, to wit, according to ſuch marking as the uppermoſt little croſſe (being high or low) is ſet.

Having found the height of the Sunne, if the declination be northerly, you ſhall ſubſtract it from the height found, that is to ſay, if you are in the northſide of the Sunne, that is if the Sunne be ſoutherly, but if the declination be ſoutherly, then you adde it to the height found, and ſo you ſhall finde the height of the Equinoctiall, which being taken from 90, you ſhall finde the height of the Pole, as by example: Let the Sunne, as in the figure here by ſtanding, bee elevated above the Horizon B D 70 degrees, the northerly declination E D 10 degrees; If you



take theſe from B D 70 degrees, there remaines 6 degrees, the height of the Equinoctiall, this being taken from B Z, or E G 90, there remaines E Z, or B G thirty, juſt at P A the corner of the Pole.

But if you marke this ſtaffe with the number inverted, ſo that in the place of 90 you ſet 0 for 80. 10. for 70. 20. and ſo forth, as the common croſſe ſtaffe is marked ordinarily, which you uſe toward the Sunne, you muſt then on the contrary uſe the northerly declination, and ſubſtract the ſoutherly and ſo at the firſt without further marking, you have the height as it is in the figure, if as in that which went before you to the height of the Sun being elevated D 70 gr. you ſhall in place 70 finde on the ſtaffe 20, that is not the height of the Sun from the Horizon B D, but the fulfilling of the height to 90 degrees as D Z, that is the diſtance of the Sun and Zenith, if then you joine to it the northerly declination D E 10 gr. that makes together E Z 30 degrees, the diſtance of the Equinoctiall and Zenith, and juſt at P A the elevation of the Pole. In the ſame manner if the Sun hath ſoutherly declination, and is riſen from the Horizon 50 gr. as in S you ſhall not find on the ſtaffe 50 gr. for B S, but 40 gr. for S Z the diſtance of the Sunne and the Zenith. Then if you take S E the ſoutherly declination from S Z 40, there remains E Z 30 degrees, for the diſtance of the Equinoctiall and the Zenith juſt at P A the height of the Pole.

That the unſliding peece ſhould be moveable by the ſight it is done for 2 cauſes, firſt that you may ſlide it netherward or outward as theſe and ſliding of the great croſſe requireth, ſecondly, that in foule weather when the waves goe high, you may ſet it inward (as occaſion ſhall require) for your better meaſuring, for where the waves are high and trouble ſom long inſtruments are not ſo fit for uſe as ſhort. This foreſaid croſſe ſtaffe is very fit, to take the height certainely on the firm land, without the uſe of the Horizon. That you may do this, you ſhall lay the ſtaffe on a table or any other flat place in a right line with the water the eye end directly to the ſouth, and with the other end, where the thwart ſliding peece ſtandeth to the north, on two ſmooth peeces of wood, ſo much lifted up that you may ſlide the long croſſe too and againe without hinderance, then when the Sunne comes directly ſouth, that is, when the Sunne hath equall ſhaddow on each ſide of the ſtaffe, then ſhall you ſlide the longe croſſe too and fro, ſo long untill the ſhaddow of the eare at the little croſſe fall juſt betweene the two parallell lines on the thwart croſſe, that being done, you ſhall finde the height of the Sun in the ſtaffe at the long croſſe, which being ſound, you ſhall by that know the height of the Pole or the diſtance of the place where you take the height according to the inſtructions before laid downe.

A short Instruction.

Here followeth the Table by which you muſt marke the foreſaid croſſe ſtaffe.

The firſt Columne sheweth the degrees, the ſecond the minutes, which are above the degrees, the third the number of prickes, points, or parts belonging to ſuch degrees and minutes.

gr.	mi.	parts.
0	0	0
	15	43
	30	87
	45	131
1	0	157
	15	218
	30	162
	45	306
2	0	349
	15	393
	30	437
	45	480
3	0	524
	15	568
	30	612
	45	655
4	0	699
	15	743
	30	787
	45	831
5	0	875
	15	919
	30	963
	45	1007
6	0	1051
	15	1095
	30	1139
	45	1184
7	0	1228
	15	1272
	30	1317
	45	1361
8	0	1405
	15	1450
	30	1495
	45	1539
9	0	1584
	15	1629
	30	1672
	43	1718
10	0	1763
	15	1808
	30	1853
	45	1899
11	0	1984
	15	1989
	30	2034
	45	2080
12	0	2126
	15	2171
	30	2217
	45	2263
13	0	2309
	15	2355
	30	2401
	45	2447
14	0	2493
	15	2540
	30	2506
	45	2632

gr.	mi.	parts.
15	0	2680
	15	2726
	30	2773
	45	2820
16	0	2867
	15	2915
	30	2962
	45	3010
17	0	3057
	15	3105
	30	3153
	45	3101
18	0	3250
	15	3297
	30	3346
	45	3394
19	0	3443
	15	3492
	30	3541
	45	3590
20	0	3640
	15	3689
	30	3739
	45	3789
21	0	3839
	15	3889
	30	3939
	45	3990
22	0	4040
	15	4001
	30	4091
	45	4193
23	0	4245
	15	4296
	30	4348
	45	4400
24	0	4452
	15	4505
	30	4557
	45	4620
25	0	4663
	15	4716
	30	4770
	45	4923
26	0	4877
	15	4931
	30	4986
	45	5040
27	0	4095
	15	5150
	30	5206
	45	5261
28	0	5317
	15	5373
	30	5429
	45	5486
29	0	5543
	15	5600
	30	5657
	45	5715

gr.	mi.	parts.
30	0	5773
	15	5832
	30	5890
	45	5949
31	0	6009
	15	6068
	30	6128
	45	6188
32	0	6249
	15	6310
	30	6371
	45	6432
33	0	6494
	15	6556
	30	6619
	45	6682
34	0	6745
	15	6809
	30	6873
	45	6937
35	0	7002
	15	7067
	30	7133
	45	7199
36	0	7265
	15	7332
	30	7400
	45	7467
37	0	7535
	15	7604
	30	7672
	45	7743
38	0	3815
	15	7883
	30	7954
	45	8026
39	0	8098
	15	8170
	30	8243
	45	8317
40	0	8391
	15	8466
	30	8541
	45	8617
41	0	8693
	15	8770
	30	8847
	45	8925
42	0	9004
	15	9083
	30	9163
	45	9244
43	0	9325
	15	9407
	30	9490
	45	9573
44	0	9657
	15	9742
	30	9827
	45	9913

gr.	mi.	parts.
45	0	10000
	15	10088
	30	10179
	45	10265
46	0	10355
	15	10446
	30	10538
	45	10630
47	0	10724
	15	10818
	30	10913
	45	11009
48	0	11106
	15	11204
	30	11303
	45	11403
49	0	11504
	15	11606
	30	11708
	45	11812
50	0	11917
	15	12024
	30	12131
	45	12239
51	0	12349
	15	12460
	30	12578
	45	12685
52	0	12799
	15	12915
	30	13032
	45	13151
53	0	13270
	15	13391
	30	13514
	45	13638
54	0	13764
	15	13891
	30	14020
	45	14155
55	0	14281
	15	14415
	30	14550
	45	14687
56	0	14826
	15	14966
	30	15108
	45	15252
57	0	15398
	15	15547
	30	15697
	45	15849
58	0	16003
	15	16160
	30	16318
	45	16480
59	0	16643
	15	16808
	30	16977
	45	17147

gr.	mi.	parts.
60	0	17320
	15	17496
	30	17675
	45	17856
61	0	18040
	15	18227
	30	18418
	45	18611
62	0	18807
	15	19007
	30	19210
	45	19416
63	0	19626
	15	19840
	30	20057
	45	20278
64	0	20503
	15	20732
	30	20965
	45	21203
65	0	21445
	15	21692
	30	21943
	45	22199
66	0	22460
	15	22727
	30	22998
	45	23275
67	0	23548
	15	23847
	30	24442
	45	24343
68	0	24751
	15	25065
	30	25386
	45	25715
69	0	26051
	15	26394
	30	26746
	45	27106
70	0	27475
	15	27852
	30	28239
	45	28635
71	0	29042
	15	29459
	30	29887
	45	30326
72	0	30777
	15	31240
	30	31716
	45	32205
73	0	32708
	15	33226
	30	33759
	45	34308
74	0	34874
	15	33457
	30	36059
	45	36680

gr.	mi.	parts.
75	0	37320
	15	37983
	30	38667
	45	39375
76	0	40103
	15	40866
	30	41653
	45	42468
77	0	43315
	15	44194
	30	45107
	45	46057
78	0	47046
	15	48087
	30	49152
	45	50273
79	0	51445
	15	52671
	30	53955
	45	55300
80	0	56713
	15	58196
	30	59757
	45	61402
81	0	63137
	15	64971
	30	66911
	45	68969
82	0	71154
	15	73478
	30	75955
	45	78606
83	0	81443
	15	84489
	30	87769
	45	91309
84	0	95144
	15	99310
	30	103854
	45	108829
85	0	114300
	15	120346
	30	127062
	45	134566
86	0	143006
	15	152570
	30	163498
	45	176105
87	0	190811
	15	208188
	30	229038
	45	254518
88	0	286362
	15	327302
	30	381885
	45	458293
89	0	572900
	15	763900
	30	1145888
	45	2291811

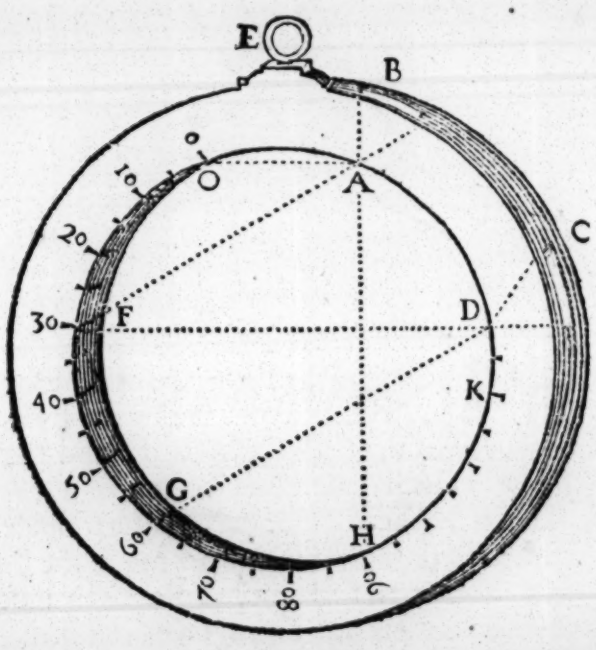
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The 26 Point. Concerning the uſe of the ſearing.

THe Aſtrolabiums which men now a dayes commonly uſe at Sea, I meane that with a Dioptra, upon which ſtand two penullen, & are not verry ſerviceable by reaſon of the continuall motions of the ſhips to bee uſed at ſea unleſſe the penullen upon the Dioptra are placed neere by one another, for then the Shipmaiſtres ſome times uſe the Aſtrolabium in the meaſuring of the Sunne. Nevertheleſſe the Aſtrolabium can have no ſuch perfection in it, for the Dioptra in the ſaid Aſtrolabiums are placed almoſt 2 or 3 inches at moſt the one from the other, and if ſo bee, in a little time, a ſmall fault or miſtake happen in the obſervation of the ſhaddows even as through motion of the ſhipp it may eaſily happen, ſoo alſo muſt the Dioptra upon the degrees of the Limbus make a greater miſtake and fault.

Therefore have I here ſet downe this figured and drawne Ring which you may let be made ready or prepared by Meſſig about one foote or a foote & halfe wide and 2 or 3 inches broad. For in the uſe of it you have no neede of a Dioptra but you let the Sunne ſhine through the little holes becauſe the ſhaddow may the more perfectly and narrowly bee obſerved ſo; then let the ring bee covered on both ſides onely that there may bee ſome opening left that ſo the degrees which ſtand marked on the inſide may bee fitly ſeene and uſed.

Theſe degrees fall once more wider one from the other then in the Limbus of the Aſtrolabium, becauſe in this the ſhadow falleth out of the circumference, or out of the ſides and not (as it is in the Aſtrolabium) out of the Center, and therefore is the whole circumference of the Ring according to the Art of Geometry devided into 180 degrees, whereas on the contrary in the Aſtrolabium the Limbus or round ring encompaſſing it containeth 360 degrees.



The beginning of the degrees beginneth by the letter O, right even againſt the little hole over that which is placed next by the handel: there are 2 little holes or chinkes made in the Ring through which you let the ſhaddow fall, the one ſtands by the letter B, placed about 10 degr. from the pendel E, by which the ringhs hung. The other little hole C ſtands juſt 30 degrees diſtant from the little hole B becauſe: whed the Sunne is not verry high above the Horiſon, then we receive the ſhaddow through the little hole C, and then wee begin to count the degrees not farre from the letter O, as beforeſaid, but from the letter F, ſtanding right juſt over againſt C juſt 30 degrees diſtant from O.

This ring being thus made I ſhould thinke it moſt fitting to ſignify the height of the Sunne, notwithſtanding the Shipmaiſtres now adayes uſe the degree-bow, which nevertheleſſe are greately ſubject to faults and miſtakes.

The 27 Point. Of the breadth of the Lands.

THe breadth of Lands or Countries is no other, then the diſtance or wideneſſe that is betweene the ſaid Lands and the Equinoctiall Line, which is reckoned in a double manner, that is northerly and ſoutherly, to the number of 90. Such Lands of Countries as lye right under the Equinoctiall Line have no breadth: but ſuch as lye northward from it, have northerly breadth, and they that lye ſoutherly have ſoutherly breadth.

Example.

The Iland of S. Thomas, in the River Gaban in Guiena lyeth right under the Line, and therefore hath no breadth neither northerly nor ſoutherly.

The Cape S. Vincent in Spaine lyeth northward from the Line 37 degrees, and therefore the northern breadth of Cape S. Vincent is 37 degrees.

The point of Lizart in England lyeth northward from the Line 50 degrees, therefore the north breadth of Lizart is 50 degrees.

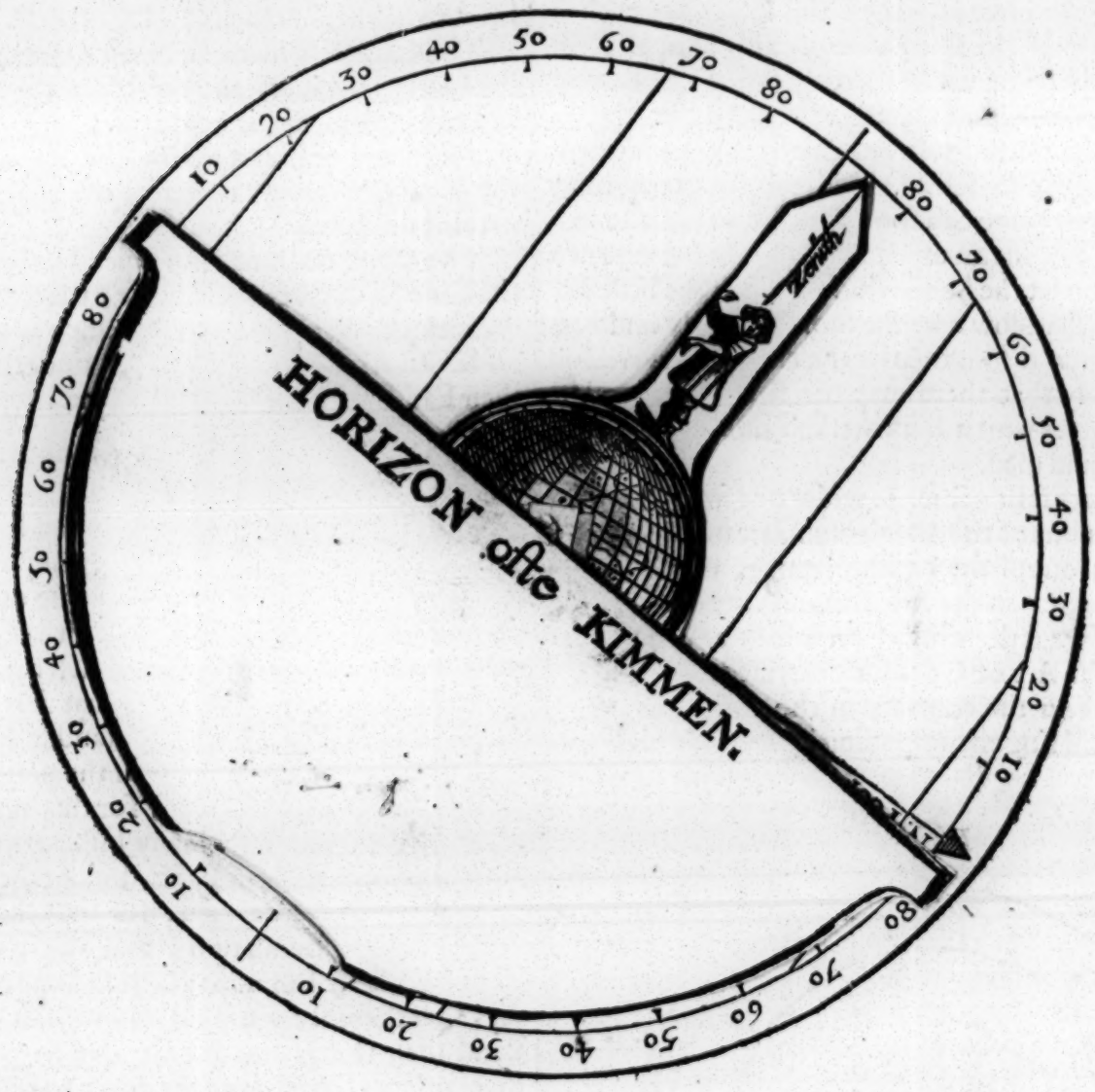
The Cape de Bona Eſperance lyeth ſouthward from the Line 34 degrees and a halfe, therefore the ſoutherly breadth of Cape de Bona Eſperance is 34 degrees and a halfe. In like manner you muſt underſtand and reckon their Lands, Countries and Townes.

The 28 Point. Of the height of Lands and Countries, and what it is.

THE height and breadth of Lands and Countreyes although that in themſelves they are divers things, yet they are allwayes one like unto the other. Any Countrey being ſcituated under the breadth of 30 degrees, lyeth alſo in the height 30 degrees, which by Sea-faring men is taken without difference, but what it is, or what it hath in it or ſignifieth few men underſtand, and yet it behooveth a ſeafaring man, that ſeeketh for the height of any Countries, to bee expert therein, for that no man without it can wel underſtand how many inſtruments (whether it be Aſtrolabium, or Croſſe ſtaffe, no nor the Sea-compaſſe it ſelfe) ſhould well be uſed: for that theſe things are all built upon one foundation, and like a chaine hang one upon the other. But it may be that ſome man will object & ſay, that there are many Pilots which doe not well underſtand ſuch things and yet are able to goe directly unto divers places, whether they deſire to ſayle: which I confeſſe to be true: but tell me how many times are they deceived? How many times are they in great doubt & feare? and how ſeldome dare they truſt unto the height which they have taken or reckoned, when they are to ſeeke out any Countrey thereby? how oftentimes hath it heretofore happened, that for want of ſuch knowledge, ſhippes have ſayled out of their way either, behinde England, or upon France, which thought to paſſe through the chanell between England and France, and that in ſo ſhort and well knowne, and common ſayled water, as to come out of Spaine or France? what would ſuch men doe, if they ſhould paſſe the Line, and were to ſeeke or finde out certaine Ilands? Or that after they had ſayled up and downe the Seas certaine moneths together, ſhould then ſeeke out for Land? but I am of this opinion which I know every man will grant that it is much better and more aſſured to goe away being guided by his owne eye-ſight, then like a blinde man to bee led by another, and knoweth not whether that other ſeeth well or not: but to come againe to our matter, touching the height of Countries, it is no other but the height of the Pole above the Horizon, that is to ſay, ſo many degrees as the Pole in any Land is lifted up above the Horizon, ſo much is the height of ſuch a Country: & this height agreeth allwayes with the breadth as aforeſayd. In the 10 chapter it is ſhewed, that whereſoever a man goeth or turneth, alwayes the one halfe of the Heavens ſheweth it ſelfe above the Horizon and the other halfe is hidden from us: in the firſt chapter it is ſaid that

that the two Poles ſtand right one againſt the other, whereby it is evidently to be underſtood, that whenſoever a man being upon the earth is right under the Equinoctiall line, that then both the Poles of the World, lye right in the Horizon, one in the ſouth, and the other in the north: and as much as a man travaileth northward from the Equinoctiall line, and winneth breadth northerly, ſo much the north Pole riſeth above the Horizon: and the ſouth Pole contrarywiſe goeth ſo much under: and on the contrary, as many degrees as a man goeth from the Equinoctiall line ſouthward, and winneth breadth ſouthward, ſo much the ſouth Pole riſeth above the Horizon, and the north Pole goeth ſo much under: which may eaſily be underſtood by the figure here after following.

In this figure the innermoſt roundel that turneth about, ſignifieth the Heaven, N the north Pole, S the ſouth Pole, Æ the Equinoctiall, the uppermoſt edge of the halfe moveable roundell, ſignifieth the Horizon, the one halfe off the Heavens is above it, and the other halfe juſt under it, the round ball in the middle ſignifieth the earth, where in jou ſee a little man, that may be turned upon the earth ſouthward and northward.



Now perfectly to marke and perceive that which is before written, that is to know what height is, and that it alwayes agreeth with the breadth, bring the little man upon the Earth Globe right under the Equinoctiall, that is to ſay that it have no breadth, neither northward nor ſouthward, then you ſhall ſee that both the Poles lye juſt with the Horizon, and that neither of them both are elevated above it, nor depreſſed under it, and with all, you ſhall ſee that they that dwell under the Equinoctiall have no height or elevation of the Pole, not yet any breadth. But if you remove the man ſo much northward that hee goeth tenne degrees upon the earth, that is, that hee commeth tenne degrees upon the north breadth, you ſhall ſee that the north Pole ſhall bee rayſed or elevated tenne degrees above the Horizon in the north, and the ſouth Pole ſhall goe ten degrees under the Horizon: and if you remove the man upon the earth more northerly, as thirty, forty, or fifty degrees, the north Pole will alſo be ſo much elevated, and the ſouth Pole to the contrary ſo much depreſſed under the Horizon: ſo that if you turne the man upon the earth to ninety degrees, then the north Pole alſo will bee elevated ninety degrees, that is the Pole will ſtand right above his head, and the Equinoctiall will joyne with the Horizon in one circle: that which thus is ſaid of the elevating of the north Pole, is alſo in the ſame manner to be underſtood of the ſouth Pole: for if you likewiſe move the man upon the earth in the figure toward the ſouth, the ſouth Pole will be elevated above the Horizon, as much as the man in breadth goeth ſouthward, and the north Pole will goe ſo much under the Horizon.

One thing is herein to be noted, that as much as the Pole riſeth above the Horizon juſt ſo much the Equinoctiall goeth under it, and when the Pole goeth under, the Equinoctiall riſeth againe in equall proportion.

But above all you muſt marke, that the number of the Poles elevation added to the height of the Equinoctiall alwayes make even ninety degrees, ſo that when the Pole is elevated 30 degrees in the north, the Equinoctiall is elevated ſixty degrees in the ſouth: but if the ſouth Pole bee elevated above your Horizon twenty degrees, the Equinoctiall will bee elevated in the north ſeventy degrees, which is clearly underſtood and ſhewed in this manner: we alwayes ſee halfe the Heavens above the Horizon, (as aforeſaid) which is twice ninety degrees, from the ſouth to the Zenith or the point juſt over our heads, and from the Zenith to the Horizon in the north. Now ſeeing that betweene the Equinoctiall and the Pole there are alwayes ninety degrees, (as is ſhewed in the ſecond chapter) it followeth that which is beneath the Pole and the Equinoctiall, maketh alſo ninety degrees: therefore when we know the height of the Equinoctiall, and take it out of ninety, that which reſteth over is alwayes the height

height of the Pole, this al ſo may bee ſeene in the figure aforeſaid.

The 29 Point. Concerning the difference and agreement of the Declination in divers places of the earth.

THeſe Tables of the Suns declination are reckoned upon the Meridian or length of the earth from the weſtend of England. Thoſe which are more eaſterly from thence, have the leſſer declination, when the Sun departeth from the Line, and increaſeth in declination either towards the North or South as wel betweene the 20 of March, and the 22 of June, as betweene the 23 of September, and the 22 of December, and the greater declination, when the Sun returneth againe towards the Line, whether it bee by north of by ſouth the Line as wel betweene the 22 of December, and the 20 of March, as betweene the 22 of June, and the 23 of December.

On the contrary, thoſe which are more weſterly from thence, have the waxing declination (that is when the Sun runneth from the Line either by North or by South the Line, the greater declination and the falling declination) that is when the Sunne runneth againe towards the Line, either by North or by South the Line, maketh the leſſe. That commeth to paſſe by reaſon of time, thus. Thoſe which are more eaſterly have the Sunne ſooner in the ſouth or in their Meridian, and therefore is the waxing declination leſſe, and the falling greater, on the contrary thoſe which are more weſterly have the Sunne later in the South, and therefore have they the increaſing declination more, the decreaſing leſſe.

The firſt Example.

Concerning thoſe which are more eaſterly with riſing declination upon the 25 of March in the ſecond yeare following the Leap-yeare I deſire to know the Sunnes declination at noone at Bantam in the Eaſt-Indies. Firſt I ſeeke upon a Globe or any other Table, how much more Eaſterly Bantam lyeth then the Lands end of England, and I find it to bee about 120 degrees (herein wee reckon not ſo neare upon a degree or two, becauſe ſuch a difference is but little in this reſpect) whilſt then the Sunne muſt have 24 houres to run about the Heaven or the whole earth which is 360 degrees, I ſeeke how much time hee muſt have to run 120 degrees, and I ſay thus: 360 degrees make 24 houres, what maketh then 120, facit 8 houres, from thence I find that the Sunne commeth 8 houres ſooner to the South at Bantam then at the Lands end of England, that is: That the Sunne is fall South at Bantam, when it is but 4 a clock after midnight at Englands Lands end. Then I looke in theſe Tables upon the abovewritten 25 of March for the declination of the Sun, and I find it to bee 1 degree 57 minutes, and (out of the declination on the day following 2 degrees 21 minutes) that the declination of the Sun at that time in 24 houres increaſeth 24 minutes, therefore ſay I: if the declination increaſe 24 minutes in 24 houres how much in 8 houres? facit 8 minutes, from thence it is cleare that ſeeing the Sun runneth from the Meridian over Bantam to the Meridian of Englands end, and the declination riſeth or increaſeth 8 minutes, that it at Bantam is 8 minutes leſſe as theſe Tables declare. The Suns declination is that day at Bantam no more then 1 degree and 49 minutes by north the Line.

The Second Example.

With falling Declination.

Upon the 16 of the ſame yeare I deſire to know the Suns declination at noone at Bantam, and I find in theſe Tables upon that day for the length of England Lands end 2 degrees 40 minutes, that it decreaſeth every day at that time of the yeare 24 minutes. Seeing then the Sun (as is ſayd in the firſt example) cometh 8 houres ſooner to the South at Bantam then at Englands end, I ſay doth the declination decreaſe 24 minutes in 24 houres, how much maketh it in 8 houres? it maketh 8 minutes from thence it is kowne, that ſeeing the Sunne runneth from the Meridian of Bantam to that of Englands End, and the declination falleth 8 minutes, and therefore at Bantam is it 8 minutes more, even as theſe Tables declare. The declination of the Sunne on that day is at Bantam 2 degrees and 48 minutes.

Obſervation.

From hence it followeth: That one and the ſame Steerman (ſayling eaſtwards to the Indies) comming upon two ſuch divers times before the Straite of Sunda, and would take the height of the Pole according to the Sun of one and the ſame corner of Land, and ſhould uſe theſe Tables without ſuch caution, hee ſhould (though hee thought it wel done) thereby (taking one time 8 minutes ſoo much and the other time 8 minutes too little declination) hee ſhould find it to differ 16 minutes in his height, therefore in long voyages you muſt thinke wel upon this.

The third Example. Concerning thoſe which are more Weſterly with riſing declination.

A certaine Ship comming upon the 9 of October in the third yeare after Leap-yeare upon the greate South Sea, neare the Coaſt of Peru, the Steerman deſireth to know the Suns declination there at noone, hee findeth (out of a Globe or any other Table) that that Coaſt lyeth full 80 degrees more Weſterly then Englands Lands End. The Sun muſt then run from the South over Englands end to the South of the foreſaid Coaſt of Peru full 80 degrees, to which hee requireth about 5 houres and an halfe, ſo that when the Sun ſtandeth there in the South, it is then from Englands end halfe an houre paſt 5 in the afternone. Hee findeth in theſe Tables the declination of that day 6 degrees 13 minutes by South the Line, and (out of that of the following day which is 6 degrees 36 minutes) that at that time in 24 houres the declination riſeth 23 min.) therefore ſhall hee ſay: the declination riſeth in 24 houres 33 minutes, how much then in 5 houres and a ½? facit full 5 minutes, and from thence wee find, that ſeeing the Sun running from the Meridian of Englands end to hert of the Coaſt of Peru riſeth full 5 minutes, and thereupon the declination on that day is there 5 minutes more even as the tables demonſtrate. The declination then on that day on the Coaſt of Peru is 6 degrees 18 minutes.

The firth Example. Concerning the falling declination.

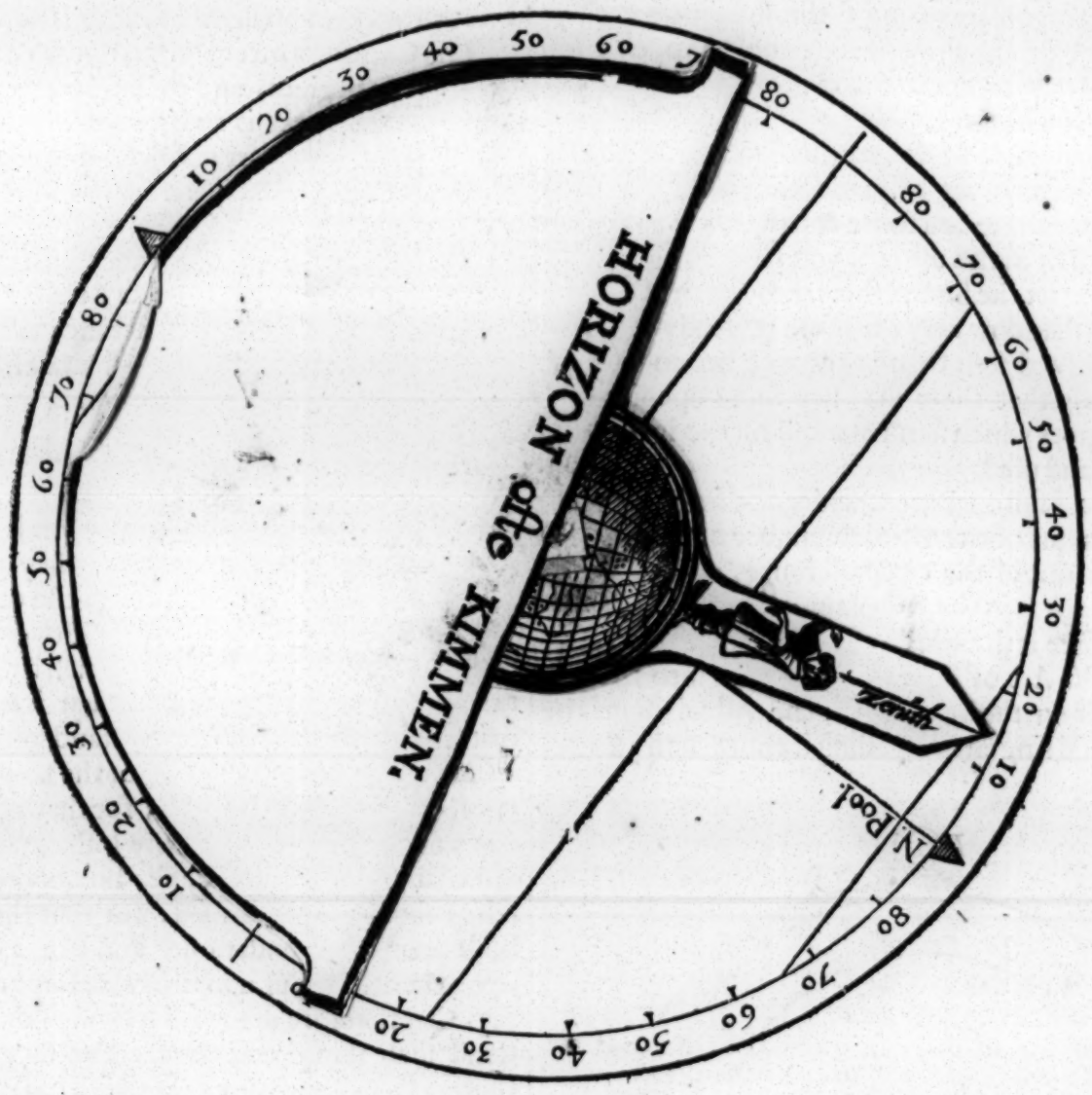
Suppoſe that ſuch commeth to paſſe on the foreſaid Coaſt of Peru on the 8 of September the ſame yeare; theſe tables point at the declination of that day 5 degrees 46 minutes, and the day following 5 degrees 23 minutes, ſo as upon that time of the yeare in 24 houres time the declination leſſeneth 23 minutes. The Steerman ſhal then reckon thus, if in 24 houres the declination leſſeneth 23 minutes, how much is that in 5 houres and a halfe, facit full 5 minutes, and ſhall from thence find that his declination is there 5 minutes leſſe, as theſe Tables inſtruct, the Sunnes declination then upon that day is upon the Coaſt of Peru 5 degrees 42 minutes, from hence may bee underſtood, what it is which before is ſaid in the example of the more eaſterly, that a Steereman whe would looke after the Sun on the Coaſt of Peru upon ſuch two divers times in the ſame place, and would uſe theſe Tables of declination without the foreſaid care and caution, though hee ſayle right and well ſhould nevertheleſſe find 10 minutes difference.

The fifth Example.

Suppoſe 2 Ships beeing together depart from theſe Lands, the one ſayleth eaſtwards, and commeth according to his reckoning upon the 26 of September in the firſt yeare following the Leap-yeare on the other ſide of the world, I ſuppoſe 180 degrees, in longitude diſtant from Englands end, and find in theſe Tables the declination of

that the two Poles ſtand right one againſt the other, whereby it is evidently to be underſtood, that whenſoever a man being upon the earth is right under the Equinoctiall line, that then both the Poles of the World, lye right in the Horizon, one in the ſouth, and the other in the north: and as much as a man travaileth northward from the Equinoctiall line, and winneth breadth northerly, ſo much the north Pole riſeth above the Horizon: and the ſouth Pole contrarywiſe goeth ſo much under: and on the contrary, as many degrees as a man goeth from the Equinoctiall line ſouthward, and winneth breadth ſouthward, ſo much the ſouth Pole riſeth above the Horizon, and the north Pole goeth ſo much under: which may eaſily be underſtood by the figure here after following.

In this figure the innermoſt roundel that turneth about, ſignifieth the Heaven, N the north Pole, S the ſouth Pole, Æ the Equinoctiall, the uppermoſt edge of the halfe moveable roundell, ſignifieth the Horizon, the one halfe off the Heavens is above it, and the other halfe juſt under it, the round ball in the middle ſignifieth the earth, where in jou ſee a little man, that may be turned upon the earth ſouthward and northward.



Now perfectly to marke and perceive that which is before written, that is to know what height is, and that it alwayes agreeth with the breadth, bring the little man upon the Earth Globe right under the Equinoctiall, that is to ſay that it have no breadth, neither northward nor ſouthward, then you ſhall ſee that both the Poles lye juſt with the Horizon, and that neither of them both are elevated above it, nor depreſſed under it, and with all, you ſhall ſee that they that dwell under the Equinoctiall have no height or elevation of the Pole, not yet any breadth. But if you remove the man ſo much northward that hee goeth tenne degrees upon the earth, that is, that hee commeth tenne degrees upon the north breadth, you ſhall ſee that the north Pole ſhall bee rayſed or elevated tenne degrees above the Horizon in the north, and the ſouth Pole ſhall goe ten degrees under the Horizon: and if you remove the man upon the earth more northerly, as thirty, forty, or fifty degrees, the north Pole will alſo be ſo much elevated, and the ſouth Pole to the contrary ſo much depreſſed under the Horizon: ſo that if you turne the man upon the earth to ninety degrees, then the north Pole alſo will bee elevated ninety degrees, that is the Pole will ſtand right above his head, and the Equinoctiall will joyne with the Horizon in one circle: that which thus is ſaid of the elevating of the north Pole, is alſo in the ſame manner to be underſtood of the ſouth Pole: for if you likewiſe move the man upon the earth in the figure toward the ſouth, the ſouth Pole will be elevated above the Horizon, as much as the man in breadth goeth ſouthward, and the north Pole will goe ſo much under the Horizon.

One thing is herein to be noted, that as much as the Pole riſeth above the Horizon juſt ſo much the Equinoctiall goeth under it, and when the Pole goeth under, the Equinoctiall riſeth againe in equall proportion.

But above all you muſt marke, that the number of the Poles elevation added to the height of the Equinoctiall alwayes make even ninety degrees, ſo that when the Pole is elevated 30 degrees in the north, the Equinoctiall is elevated ſixty degrees in the ſouth: but if the ſouth Pole bee elevated above your Horizon twenty degrees, the Equinoctiall will bee elevated in the north ſeventy degrees, which is clearly underſtood and ſhewed in this manner: we alwayes ſee halfe the Heavens above the Horizon, (as aforeſaid) which is twice ninety degrees, from the ſouth to the Zenith or the point juſt over our heads, and from the Zenith to the Horizon in the north. Now ſeeing that betweene the Equinoctiall and the Pole there are alwayes ninety degrees, (as is ſhewed in the ſecond chapter) it followeth that which is beneath the Pole and the Equinoctiall, maketh alſo ninety degrees: therefore when we know the height of the Equinoctiall, and take it out of ninety, that which reſteth over is alwayes the height

height of the Pole, this al ſo may bee ſeene in the figure aforeſaid.

The 29 Point. Concerning the difference and agreement of the Declination in divers places of the earth.

THeſe Tables of the Suns declination are reckoned upon the Meridian or length of the earth from the weſtend of England. Thoſe which are more eaſterly from thence, have the leſſer declination, when the Sun departeth from the Line, and increaſeth in declination either towards the North or South as wel betweene the 20 of March, and the 22 of June, as betweene the 23 of September, and the 22 of December, and the greater declination, when the Sun returneth againe towards the Line, whether it bee by north of by ſouth the Line as wel betweene the 22 of December, and the 20 of March, as betweene the 22 of June, and the 23 of December.

On the contrary, thoſe which are more weſterly from thence, have the waxing declination (that is when the Sun runneth from the Line either by North or by South the Line, the greater declination and the falling declination) that is when the Sunne runneth againe towards the Line, either by North or by South the Line, maketh the leſſe. That commeth to paſſe by reaſon of time, thus. Thoſe which are more eaſterly have the Sunne ſooner in the ſouth or in their Meridian, and therefore is the waxing declination leſſe, and the falling greater, on the contrary thoſe which are more weſterly have the Sunne later in the South, and therefore have they the increaſing declination more, the decreaſing leſſe.

The firſt Example.

Concerning thoſe which are more eaſterly with riſing declination upon the 25 of March in the ſecond yeare following the Leap-yeare I deſire to know the Sunnes declination at noone at Bantam in the Eaſt-Indies. Firſt I ſeeke upon a Globe or any other Table, how much more Eaſterly Bantam lyeth then the Lands end of England, and I find it to bee about 120 degrees (herein wee reckon not ſo neare upon a degree or two, becauſe ſuch a difference is but little in this reſpect) whilſt then the Sunne muſt have 24 houres to run about the Heaven or the whole earth which is 360 degrees, I ſeeke how much time hee muſt have to run 120 degrees, and I ſay thus: 360 degrees make 24 houres, what maketh then 120, facit 8 houres, from thence I find that the Sunne commeth 8 houres ſooner to the South at Bantam then at the Lands end of England, that is: That the Sunne is fall South at Bantam, when it is but 4 a clock after midnight at Englands Lands end. Then I looke in theſe Tables upon the abovewritten 25 of March for the declination of the Sun, and I find it to bee 1 degree 57 minutes, and (out of the declination on the day following 2 degrees 21 minutes) that the declination of the Sun at that time in 24 houres increaſeth 24 minutes, therefore ſay I: if the declination increaſe 24 minutes in 24 houres how much in 8 houres? facit 8 minutes, from thence it is cleare that ſeeing the Sun runneth from the Meridian over Bantam to the Meridian of Englands end, and the declination riſeth or increaſeth 8 minutes, that it at Bantam is 8 minutes leſſe as theſe Tables declare. The Suns declination is that day at Bantam no more then 1 degree and 49 minutes by north the Line.

The Second Example.

With falling Declination.

Upon the 16 of the ſame yeare I deſire to know the Suns declination at noone at Bantam, and I find in theſe Tables upon that day for the length of England Lands end 2 degrees 40 minutes, that it decreaſeth every day at that time of the yeare 24 minutes. Seeing then the Sun (as is ſayd in the firſt example) cometh 8 houres ſooner to the South at Bantam then at Englands end, I ſay doth the declination decreaſe 24 minutes in 24 houres, how much maketh it in 8 houres? it maketh 8 minutes from thence it is kowne, that ſeeing the Sunne runneth from the Meridian of Bantam to that of Englands End; and the declination falleth 8 minutes, and therefore at Bantam is it 8 minutes more, even as theſe Tables declare. The declination of the Sunne on that day is at Bantam 2 degrees and 48 minutes.

Obſervation.

From hence it followeth: That one and the ſame Steerman (ſayling eaſtwards to the Indies) comming upon two ſuch divers times before the Straite of Sunda, and would take the height of the Pole according to the Sun of one and the ſame corner of Land, and ſhould uſe theſe Tables without ſuch caution, hee ſhould (though hee thought it wel done) thereby (taking one time 8 minutes ſoo much and the other time 8 minutes too little declination) hee ſhould find it to differ 16 minutes in his height, therefore in long voyages you muſt thinke wel upon this.

The third Example. Concerning thoſe which are more Weſterly with riſing declination.

A certaine Ship comming upon the 9 of October in the third yeare after Leap-yeare upon the greate South Sea, neare the Coaſt of Peru, the Steerman deſireth to know the Suns declination there at noone, hee findeth (out of a Globe or any other Table) that that Coaſt lyeth full 80 degrees more Weſterly then Englands Lands End. The Sun muſt then run from the South over Englands end to the South of the foreſaid Coaſt of Peru full 80 degrees, to which hee requireth about 5 houres and an halfe, ſo that when the Sun ſtandeth there in the South, it is then from Englands end halfe an houre paſt 5 in the afternone. Hee findeth in theſe Tables the declination of that day 6 degrees 13 minutes by South the Line, and (out of that of the following day which is 6 degrees 36 minutes) that at that time in 24 houres the declination riſeth 23 min.) therefore ſhall hee ſay: the declination riſeth in 24 houres 33 minutes, how much then in 5 houres and a ½? facit full 5 minutes, and from thence wee find, that ſeeing the Sun running from the Meridian of Englands end to hert of the Coaſt of Peru riſeth full 5 minutes, and thereupon the declination on that day is there 5 minutes more even as the tables demonſtrate. The declination then on that day on the Coaſt of Peru is 6 degrees 18 minutes.

The firth Example. Concerning the falling declination.

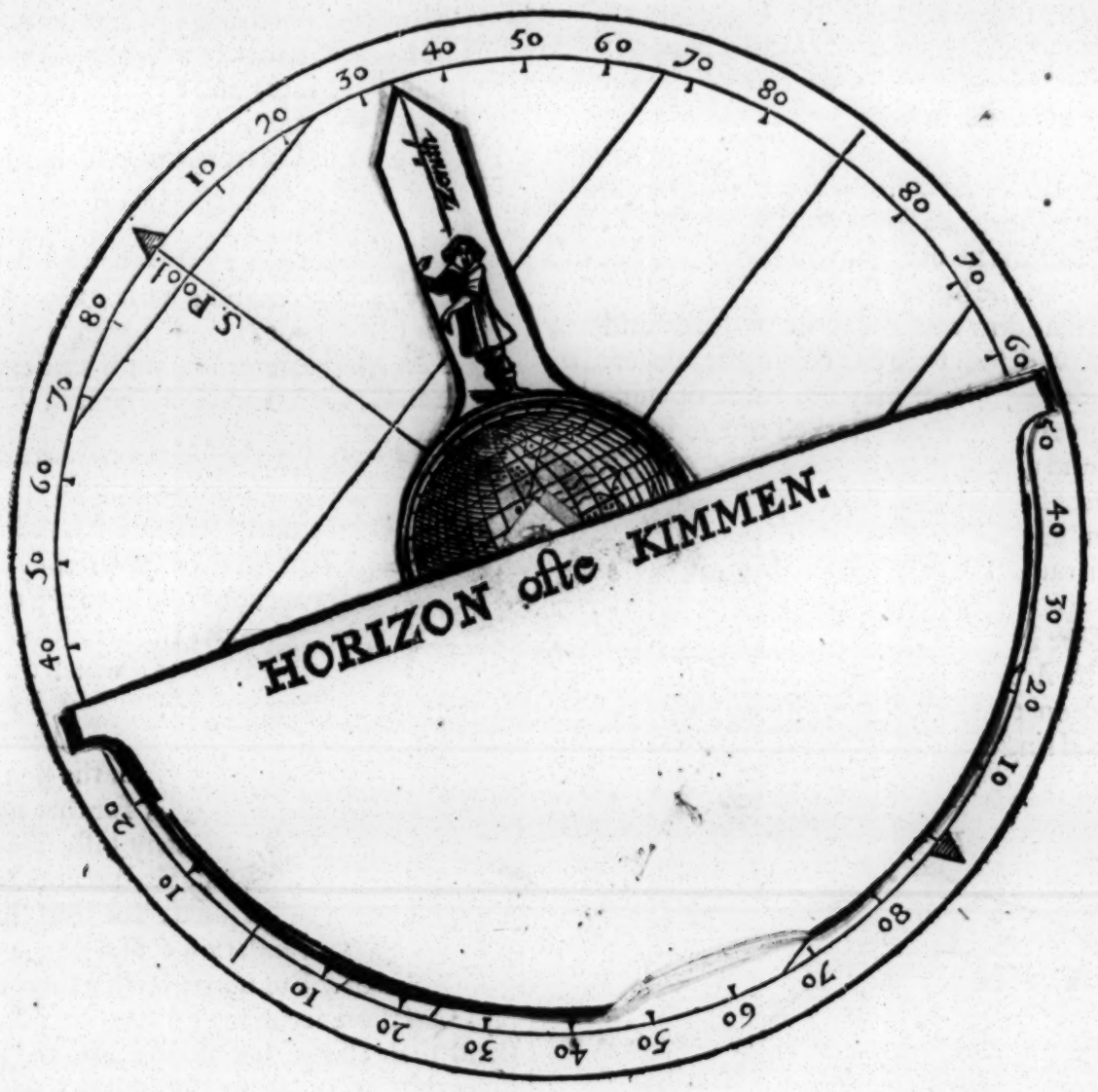
Suppoſe that ſuch commeth to paſſe on the foreſaid Coaſt of Peru on the 8 of September the ſame yeare; theſe tables point at the declination of that day 5 degrees 46 minutes, and the day following 5 degrees 23 minutes, ſo as upon that time of the yeare in 24 houres time the declination leſſeneth 23 minutes. The Steerman ſhal then reckon thus, if in 24 houres the declination leſſeneth 23 minutes, how much is that in 5 houres and a halfe, facit full 5 minutes, and ſhall from thence find that his declination is there 5 minutes leſſe, as theſe Tables inſtruct, the Sunnes declination then upon that day is upon the Coaſt of Peru 5 degrees 42 minutes, from hence may bee underſtood, what it is which before is ſaid in the example of the more eaſterly, that a Steereman whe would looke after the Sun on the Coaſt of Peru upon ſuch two divers times in the ſame place, and would uſe theſe Tables of declination without the foreſaid care and caution, though hee ſayle right and well ſhould nevertheleſſe find 10 minutes difference.

The fifth Example.

Suppoſe 2 Ships beeing together depart from theſe Lands, the one ſayleth eaſtwards, and commeth according to his reckoning upon the 26 of September in the firſt yeare following the Leap-yeare on the other ſide of the world, I ſuppoſe 180 degrees, in longitude diſtant from Englands end, and find in theſe Tables the declination of

that the two Poles ſtand right one againſt the other, whereby it is evidently to be underſtood, that whenſoever a man being upon the earth is right under the Equinoctiall line, that then both the Poles of the World, lye right in the Horizon, one in the ſouth, and the other in the north: and as much as a man travaileth northward from the Equinoctiall line, and winneth breadth northerly, ſo much the north Pole riſeth above the Horizon: and the ſouth Pole contrarywiſe goeth ſo much under: and on the contrary, as many degrees as a man goeth from the Equinoctiall line ſouthward, and winneth breadth ſouthward, ſo much the ſouth Pole riſeth above the Horizon, and the north Pole goeth ſo much under: which may eaſily be underſtood by the figure here after following.

In this figure the innermoſt roundel that turneth about, ſignifieth the Heaven, N the north Pole, S the ſouth Pole, Æ the Equinoctiall, the uppermoſt edge of the halfe moveable roundell, ſignifieth the Horizon, the one halfe off the Heavens is above it, and the other halfe juſt under it, the round ball in the middle ſignifieth the earth, where in jou ſee a little man, that may be turned upon the earth ſouthward and northward.



Now perfectly to marke and perceive that which is before written, that is to know what height is, and that it alwayes agreeth with the breadth, bring the little man upon the Earth Globe right under the Equinoctiall, that is to ſay that it have no breadth, neither northward nor ſouthward, then you ſhall ſee that both the Poles lye juſt with the Horizon, and that neither of them both are elevated above it, nor depreſſed under it, and with all, you ſhall ſee that they that dwell under the Equinoctiall have no height or elevation of the Pole, not yet any breadth. But if you remove the man ſo much northward that hee goeth tenne degrees upon the earth, that is, that hee commeth tenne degrees upon the north breadth, you ſhall ſee that the north Pole ſhall bee rayſed or elevated tenne degrees above the Horizon in the north, and the ſouth Pole ſhall goe ten degrees under the Horizon: and if you remove the man upon the earth more northerly, as thirty, forty, or fifty degrees, the north Pole will alſo be ſo much elevated, and the ſouth Pole to the contrary ſo much depreſſed under the Horizon: ſo that if you turne the man upon the earth to ninety degrees, then the north Pole alſo will bee elevated ninety degrees, that is the Pole will ſtand right above his head, and the Equinoctiall will joyne with the Horizon in one circle: that which thus is ſaid of the elevating of the north Pole, is alſo in the ſame manner to be underſtood of the ſouth Pole: for if you likewiſe move the man upon the earth in the figure toward the ſouth, the ſouth Pole will be elevated above the Horizon, as much as the man in breadth goeth ſouthward, and the north Pole will goe ſo much under the Horizon.

One thing is herein to be noted, that as much as the Pole riſeth above the Horizon juſt ſo much the Equinoctiall goeth under it, and when the Pole goeth under, the Equinoctiall riſeth againe in equall proportion.

But above all you muſt marke, that the number of the Poles elevation added to the height of the Equinoctiall alwayes make even ninety degrees, ſo that when the Pole is elevated 30 degrees in the north, the Equinoctiall is elevated ſixty degrees in the ſouth: but if the ſouth Pole bee elevated above your Horizon twenty degrees, the Equinoctiall will bee elevated in the north ſeventy degrees, which is clearly underſtood and ſhewed in this manner: we alwayes ſee halfe the Heavens above the Horizon, (as aforeſaid) which is twice ninety degrees, from the ſouth to the Zenith or the point juſt over our heads, and from the Zenith to the Horizon in the north. Now ſeeing that betweene the Equinoctiall and the Pole there are alwayes ninety degrees, (as is ſhewed in the ſecond chapter) it followeth that which is beneath the Pole and the Equinoctiall, maketh alſo ninety degrees: therefore when we know the height of the Equinoctiall, and take it out of ninety, that which reſteth over is alwayes the height

height of the Pole, this al ſo may bee ſeene in the figure aforeſaid.

The 29 Point. Concerning the difference and agreement of the Declination in divers places of the earth.

THeſe Tables of the Suns declination are reckoned upon the Meridian or length of the earth from the weſtend of England. Thoſe which are more eaſterly from thence, have the leſſer declination, when the Sun departeth from the Line, and increaſeth in declination either towards the North or South as wel betweene the 20 of March, and the 22 of June, as betweene the 23 of September, and the 22 of December, and the greater declination, when the Sun returneth againe towards the Line, whether it bee by north of by ſouth the Line as wel betweene the 22 of December, and the 20 of March, as betweene the 22 of June, and the 23 of December.

On the contrary, thoſe which are more weſterly from thence, have the waxing declination (that is when the Sun runneth from the Line either by North or by South the Line, the greater declination and the falling declination) that is when the Sunne runneth againe towards the Line, either by North or by South the Line, maketh the leſſe. That commeth to paſſe by reaſon of time, thus. Thoſe which are more eaſterly have the Sunne ſooner in the ſouth or in their Meridian, and therefore is the waxing declination leſſe, and the falling greater, on the contrary thoſe which are more weſterly have the Sunne later in the South, and therefore have they the increaſing declination more, the decreaſing leſſe.

The firſt Example.

Concerning thoſe which are more eaſterly with riſing declination upon the 25 of March in the ſecond yeare following the Leap-yeare I deſire to know the Sunnes declination at noone at Bantam in the Eaſt-Indies. Firſt I ſeeke upon a Globe or any other Table, how much more Eaſterly Bantam lyeth then the Lands end of England, and I find it to bee about 120 degrees (herein wee reckon not ſo neare upon a degree or two, becauſe ſuch a difference is but little in this reſpect) whilſt then the Sunne muſt have 24 houres to run about the Heaven or the whole earth which is 360 degrees, I ſeeke how much time hee muſt have to run 120 degrees, and I ſay thus: 360 degrees make 24 houres, what maketh then 120, facit 8 houres, from thence I find that the Sunne commeth 8 houres ſooner to the South at Bantam then at the Lands end of England, that is: That the Sunne is fall South at Bantam, when it is but 4 a clock after midnight at Englands Lands end. Then I looke in theſe Tables upon the abovewritten 25 of March for the declination of the Sun, and I find it to bee 1 degree 57 minutes, and (out of the declination on the day following 2 degrees 21 minutes) that the declination of the Sun at that time in 24 houres increaſeth 24 minutes, therefore ſay I: if the declination increaſe 24 minutes in 24 houres how much in 8 houres? facit 8 minutes, from thence it is cleare that ſeeing the Sun runneth from the Meridian over Bantam to the Meridian of Englands end, and the declination riſeth or increaſeth 8 minutes, that it at Bantam is 8 minutes leſſe as theſe Tables declare. The Suns declination is that day at Bantam no more then 1 degree and 49 minutes by north the Line.

The Second Example.

With falling Declination.

Upon the 16 of the ſame yeare I deſire to know the Suns declination at noone at Bantam, and I find in theſe Tables upon that day for the length of England Lands end 2 degrees 40 minutes, that it decreaſeth every day at that time of the yeare 24 minutes. Seeing then the Sun (as is ſayd in the firſt example) cometh 8 houres ſooner to the South at Bantam then at Englands end, I ſay doth the declination decreaſe 24 minutes in 24 houres, how much maketh it in 8 houres? it maketh 8 minutes from thence it is kowne, that ſeeing the Sunne runneth from the Meridian of Bantam to that of Englands End; and the declination falleth 8 minutes, and therefore at Bantam is it 8 minutes more, even as theſe Tables declare. The declination of the Sunne on that day is at Bantam 2 degrees and 48 minutes.

Obſervation.

From hence it followeth: That one and the ſame Steerman (ſayling eaſtwards to the Indies) comming upon two ſuch divers times before the Straite of Sunda, and would take the height of the Pole according to the Sun of one and the ſame corner of Land, and ſhould uſe theſe Tables without ſuch caution, hee ſhould (though hee thought it wel done) thereby (taking one time 8 minutes ſoo much and the other time 8 minutes too little declination) hee ſhould find it to differ 16 minutes in his height, therefore in long voyages you muſt thinke wel upon this.

The third Example. Concerning thoſe which are more Weſterly with riſing declination.

A certaine Ship comming upon the 9 of October in the third yeare after Leap-yeare upon the greate South Sea, neare the Coaſt of Peru, the Steerman deſireth to know the Suns declination there at noone, hee findeth (out of a Globe or any other Table) that that Coaſt lyeth full 80 degrees more Weſterly then Englands Lands End. The Sun muſt then run from the South over Englands end to the South of the foreſaid Coaſt of Peru full 80 degrees, to which hee requireth about 5 houres and an halfe, ſo that when the Sun ſtandeth there in the South, it is then from Englands end halfe an houre paſt 5 in the afternone. Hee findeth in theſe Tables the declination of that day 6 degrees 13 minutes by South the Line, and (out of that of the following day which is 6 degrees 36 minutes) that at that time in 24 houres the declination riſeth 23 min.) therefore ſhall hee ſay: the declination riſeth in 24 houres 33 minutes, how much then in 5 houres and a ½? facit full 5 minutes, and from thence wee find, that ſeeing the Sun running from the Meridian of Englands end to hert of the Coaſt of Peru riſeth full 5 minutes, and thereupon the declination on that day is there 5 minutes more even as the tables demonſtrate. The declination then on that day on the Coaſt of Peru is 6 degrees 18 minutes.

The firth Example. Concerning the falling declination.

Suppoſe that ſuch commeth to paſſe on the foreſaid Coaſt of Peru on the 8 of September the ſame yeare; theſe tables point at the declination of that day 5 degrees 46 minutes, and the day following 5 degrees 23 minutes; ſo as upon that time of the yeare in 24 houres time the declination leſſeneth 23 minutes. The Steerman ſhal then reckon thus, if in 24 houres the declination leſſeneth 23 minutes, how much is that in 5 houres and a halfe, facit full 5 minutes, and ſhall from thence find that his declination is there 5 minutes leſſe, as theſe Tables inſtruct, the Sunnes declination then upon that day is upon the Coaſt of Peru 5 degrees 42 minutes, from hence may bee underſtood, what it is which before is ſaid in the example of the more eaſterly, that a Steereman whe would looke after the Sun on the Coaſt of Peru upon ſuch two divers times in the ſame place, and would uſe theſe Tables of declination without the foreſaid care and caution, though hee ſayle right and well ſhould nevertheleſſe find 10 minutes difference.

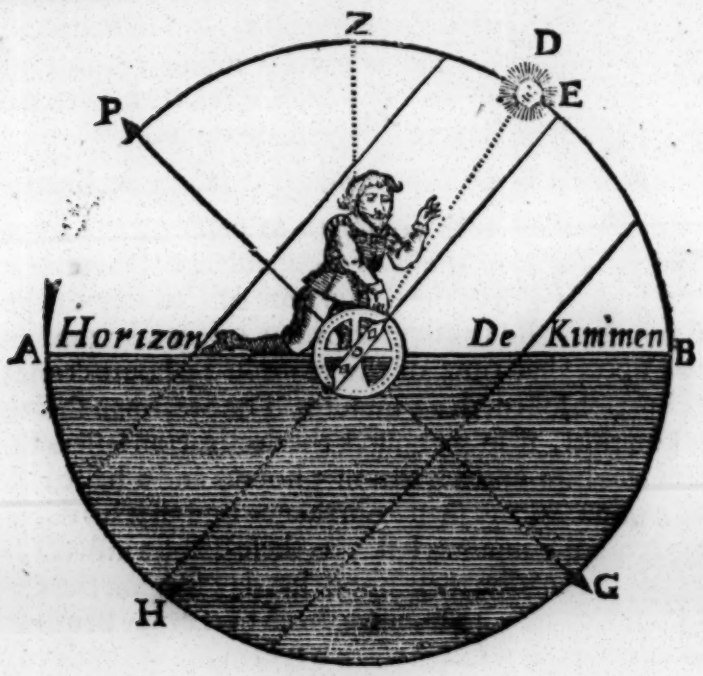
The fifth Example.

Suppoſe 2 Ships beeing together depart from theſe Lands, the one ſayleth eaſtwards, and commeth according to his reckoning upon the 26 of September in the firſt yeare following the Leap-yeare on the other ſide of the world, I ſuppoſe 180 degrees, in longitude diſtant from Englands end, and find in theſe Tables the declination of

he Sun on that day 2 degrees 0 minutes. The other ſhip ſayleth weſtwards, and meeteth the firſt ſhipp at the foreſaid place according to this reckoning not upon the 26 of Septęmber but upon the 25, and findeth the declination in theſe Tables for that day 1 degree 24 minutes, and ſo differ as wel in the time one day, and accordingly in the declination 24 minut. which commeth to paſſe from this, the firſt ſailed towards the Sunriſing 180 degrees, hath ſhortened his time 12 houres. The other ſailed with the Sunne 180 degrees, hath lengthened his time 12 houres, & thereby hath had one night leſſe then the other whilſt then the declination at that time increaſeth in one day 24 minutes, ſoo muſt hee that is ſayled eaſtwards reckon 12 minutes declination leſſe, and hee that is ſayled weſtwards muſt reckon 12 minutes more, as the Tables each and ſhall have one ſort of declination, to wit 1 deg. 12 m. haved.

The 30 *Point.* How to finde the height of the Pole by the Sunne.

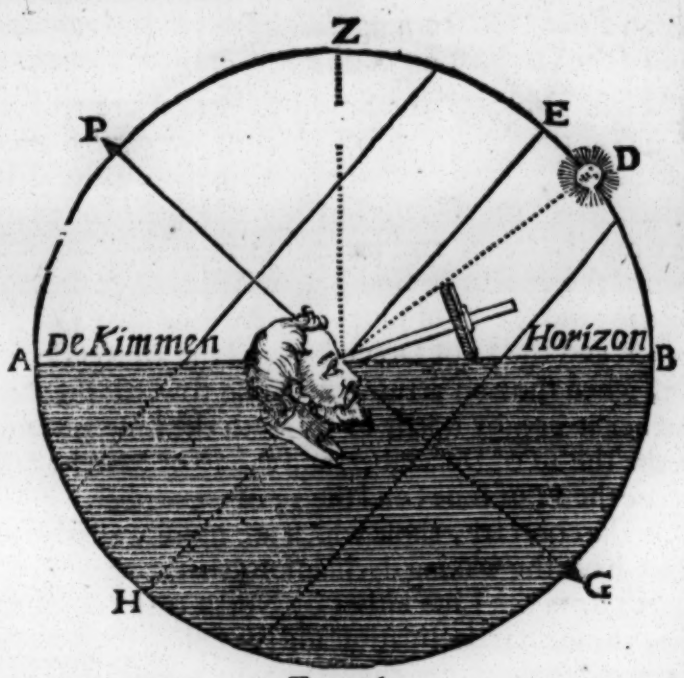
TO find the height of the Pole by the Sunne, one thing is ſpecially to bee marked, to wit, whether you are northward or ſouthward from the Sunne, whether the Sunne ſtandeth northward or ſouthward from you is eaſily knowne, when you are in ſuch a place upon the earth as is farre from the Line, or from the Sunne, but when the Sunne is neare almoſt above your head, then you cannot wel ſee it with your eye, therefore ſet a compaſſe before you that you may ſee where north and ſouth is, then take your Aſtrolabium, and ſet it ſo that the one edge thereof ſtand right ſouth, and the other north, and then you ſhall ſee at a hayres breadth, whether the Sunne being at the height, ſtandeth northward or ſouthward from the head point or Zenith: if then you will ſeeke the height of the Pole, when you are on the north ſide of the Sunne, that is, when the Sunne is Southward from you, then take the juſt height firſt, and as much as the declination of the Sunne is northward, take it out of your height and that which reſteth is the height of the Equinoctiall in the ſouth, which ſubſtracted out of ninety (as in the former Point is declared) then you have the height of the north Pole.



Example.

In this figure let P be the north Pole, and G the South Pole, E H the Equinoctiall, A B the Horizon, Z the Zenith, and D the Sun: let the height of the Sun B D bee ſixty degrees above the Horizon: the northerly declination D E 8 degrees: if then you take D E 8 degrees from B D the height of the Sunne, there will reſt B E 52 degrees, which is the height of the Equinoctiall, which taken out of 90 degrees, reſteth 38 degrees, for the height of the north Pole A P, as in the 7 point is ſhewed.

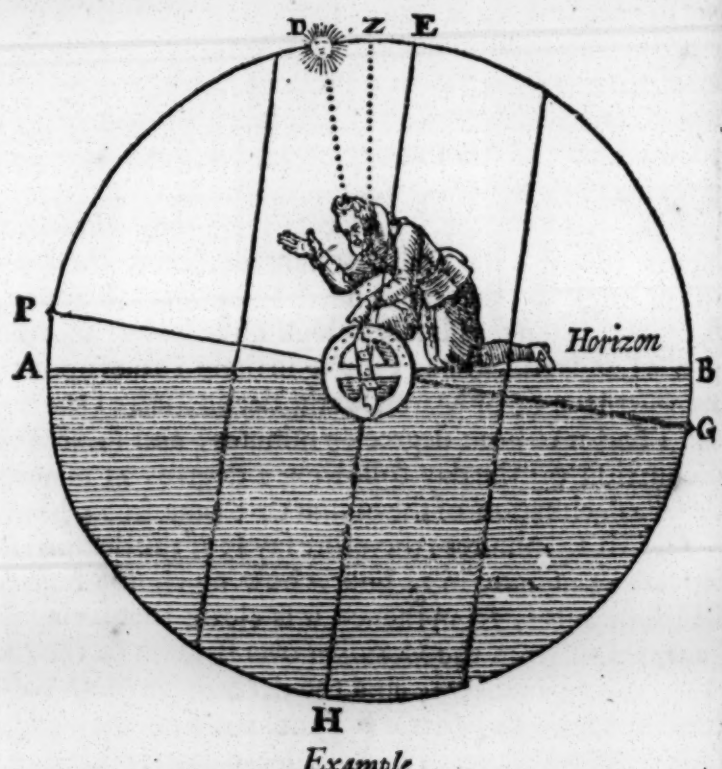
If the declination be Southerly, then adde unto the height aforeſaid taken: and then if the addition bee leſſe then 90, then looke upon the height of the Line in the ſouth which taken out of 90, as aforeſaid, it leaveth you the height of the North Pole.



Example.

Let the height of the Sun be D B 40 degrees, the ſoutherly declination of the Sun E D 20 degrees, then adde E D 20 degrees, to D B 40 degrees, it maketh E B 60 degrees the height of the Equinoctiall which ſubſtracted from 90, as E G the diſtance betweene the Equinoctiall and the ſouth Pole, then there will reſt 30 for G B, that is, as much as the ſouth Pole is gone under the Horizon: as before is ſhewed, ſo much as the one Pole is under the Horizon, juſt ſo much as the other above it, the north Pole P ſhall here be elevated thirty degrees.

But if the height of the Sunne being added unto the declination maketh more then 90 degrees, then you muſt underſtand, that the Equinoctiall is northward from your head juſt ſo much as the aforeſaid addition is more then 90 and ſo conſequently the South Pole alſo ſhall bee ſo much elevated.

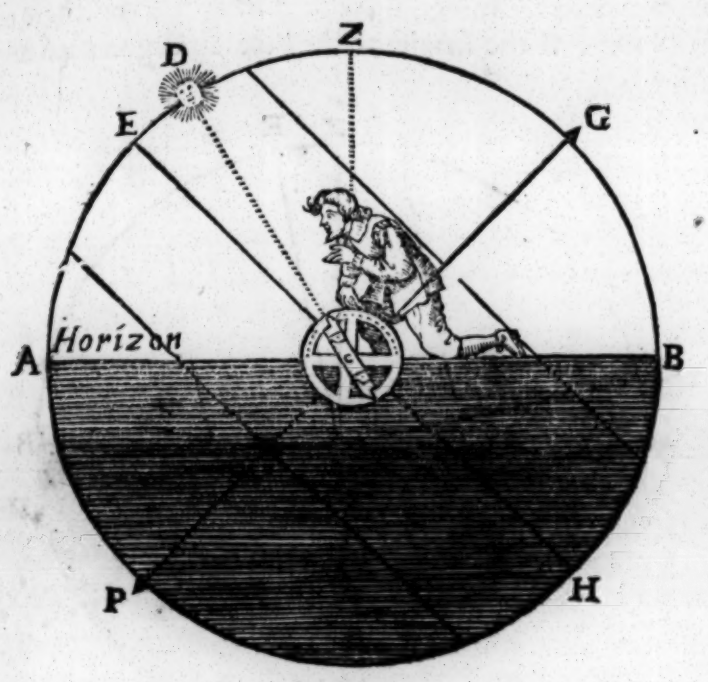


Example.

Looke into the figure next following, wherein let the height be D B 80 degrees, and the ſoutherly declination E D 18 degrees, then if you adde E D 18 degrees to B D 80 degrees, the height of the Sun there wil bee 98 degrees, for B E, ſeeing then that from the Horizon B, to the Zenith Z (that is the point in Heaven right above our heads) is juſt 90 degr. as in the 22 point is taught) it followeth that E the Equinoctiall is 8 degrees northwards from the Zenith Z, and ſo 82 degr. elevated in the north, above the Horizon: when E A is taken out of 90 there reſteth 8 degrees for the height of the ſouth Pole, G above the Horizon B, then you muſt underſtand, that you are betweene the Line and the Sunne.

How you shall finde the height of the Pole, when you are ſouthward from the Sunne.

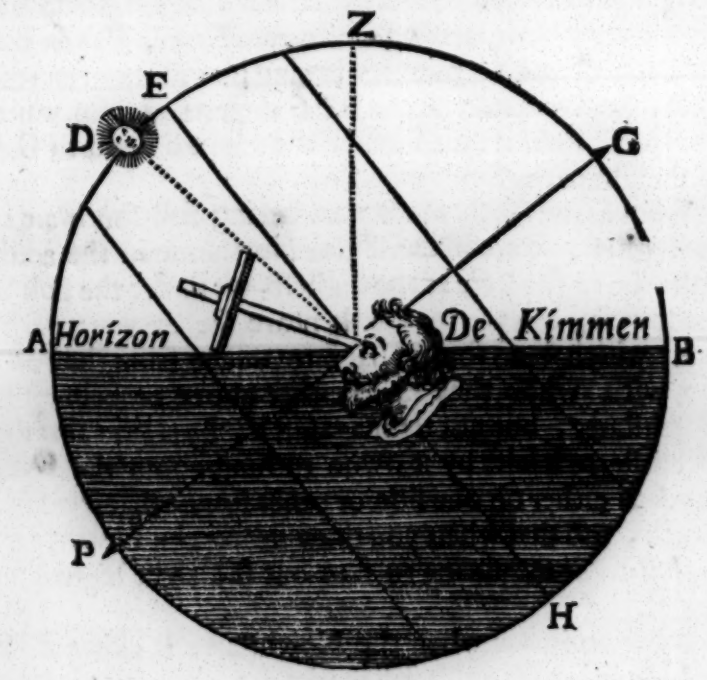
WHen you perceive that you are ſouthward from the Sunne, that is when the Sunne ſtandeth northward from you, firſt (as aforeſaid) take the height of the Sun: then if the declination be ſouthwards, take it out of your height which you have found, and then you ſhall have the height of the Equinoctiall, which ſubſtracted from 90, it ſheweth under what height you are, ſouthward from the Line.



Example.

Behold the figure above ſtanding, Let AD be the height of the Sunne in 64 degrees: the ſoutherly declination E D 16 degrees: which ſubſtracted from A D the height of the Sunne, there remaineth for A E 48 degrees, the height of the Equinoctiall in the north, which ſubſtracted out of 90 then the height of the South Pole G B will bee 42 degrees.

If the declination bee northerly, then adde it to the height found out, if then the addition bee leſſe then 19 it ſheweth you the height of the Equinoctiall, which taken out from 90, you finde the height of the ſouth Pole.



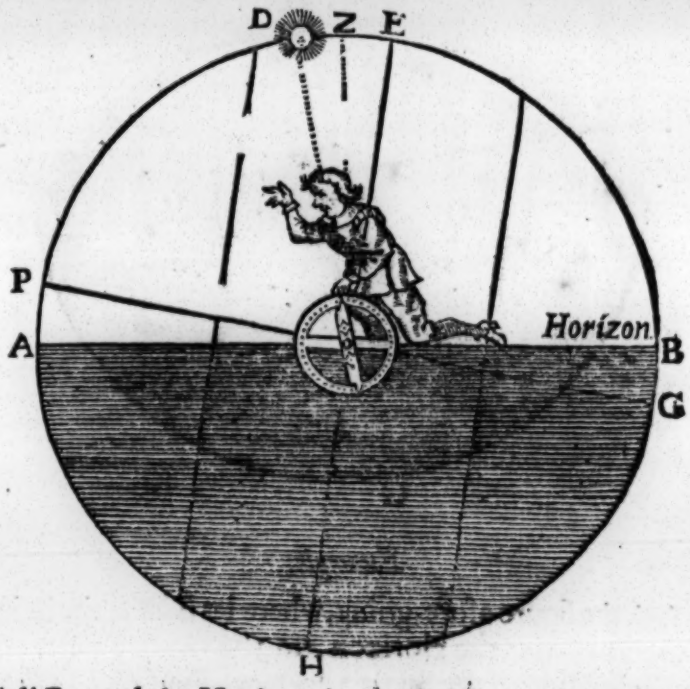
Example.

Looke on the figure with his circles as it followeth here after, let A D the height of the Sunne in the North bee 50 degrees, and D E, the northerly declination 15 degr. then adde E D 15 to D A 50 degrees, then you have 65 degr. for A E is the height of the Equinoctiall, then G B the height of the ſouth Pole is 25 deg. for as in the 27 Point it is ſhewed, the height of the Equinoctiall E A with the height of the Pole G B alwayes make 90 degrees.

But if the height and the declination of the Sun added together make more then 90, you muſt note that the Line is ſouthward from you Zenith, as much as that number is above 90.

Example.

Look on the following figure, let the height of the Sunne A D in the north bee 84 degrees, the declination E D 21 degrees, adde then together, then you have A E 105 degrees, which is the diſtance between the Equinoctiall E, and the Horizon in the north: now marke that A E is 105, and P the Pole, and E the Equinoctiall, are even 90 degrees, from each other then it followeth that P from A is 15 degrees, that is the height of the N. Pole above the Horizon, and ſo much you muſt be northward from the Line, and you muſt alſo marke that you are betweene the Line and the Sunne.



How you shall finde the height when you are right under the Sunne.

IF you underſtand well the rules before going, then this is eaſie to be found. If you be right under the Sun, that is when the Sun is elevated 90 degrees, then you are even as many degrees northward or ſouthward from the Line, as the Sunne hath northerly or ſoutherly declination.

The explication thereof.

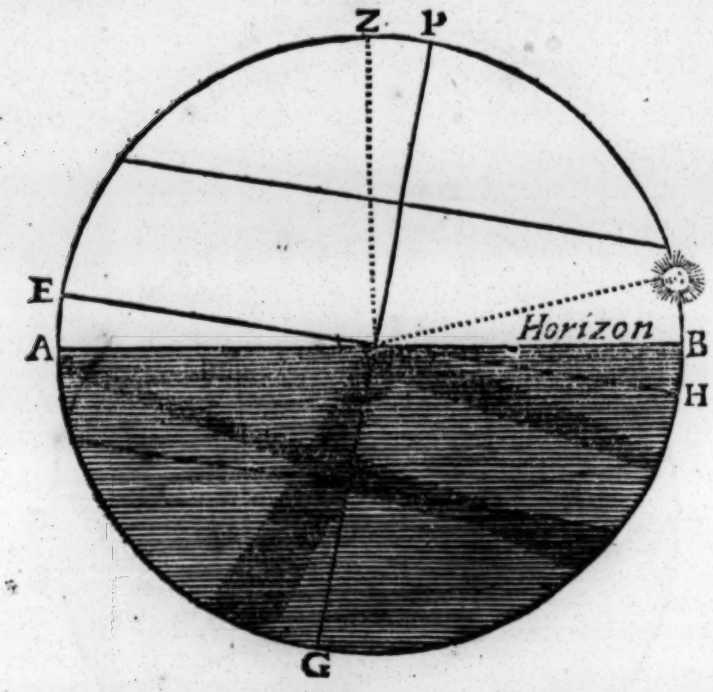
Suppoſe that you finde the height of the Sunne above the Horizon to bee 90 degrees, and that is declined toward the north 16 degrees, then are you alſo 16 degrees northward from the Line, and the north Pole ſhall bee ſo much elevated.

But if the Sun hath no declination, that is, when it ſtandeth even in the Line, then you muſt underſtand, that you are alſo right under the Line, and ſo both the Poles are on the Horizon without any elevation.

How you shall finde the height of the Sunne northward in ſuch places where as it goeth not downe.

THey that in Summer ſayle to Moſcovia, in the moneths May, June & July, comming about the north Cape, finde, that the Sunne at that time goeth not downe there, but is alwayes above the Horizon, ſo that a man according to the rules aforeſaid, may not onely ſeeke the height of the Pole by the Sunne, when it is higheſt ſouthward, but alſo when it is northward at the loweſt, in this manner following. Take the height of the Sun with the croſſe ſtaffe, when it is loweſt in the north, and adde there to the filling of the declination, (which is ſuch a number as together with the declination make ninetie, or ſo much as the Sunne ſtandeth from the Pole) and you ſhall find the juſt height of the Pole: or if you ſubſtract the height of the Sunne from his declination then you ſhal find how deep the Equinoctial is depreſſed northward under the Horizon, or in the ſouth elevated above

the Horizon, which ſubſtracted from 90, will likewiſe leave the height of the Pole, both theſe wayes I will declare apart.



Example.

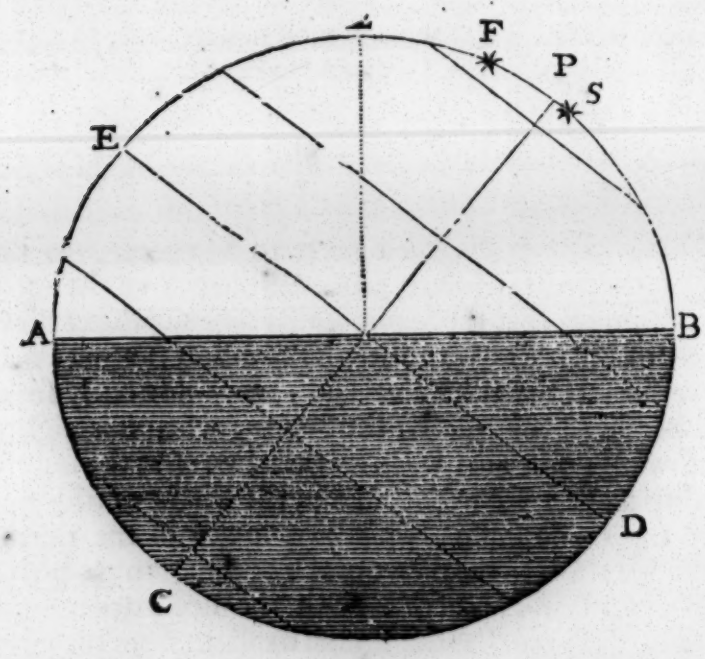
Mark the figure afore-going, where let B D be the height of the Sun about the Horizon, in the north 7 degr. H D the declination of the Sun 20 degrees, then ſhall D P the filling of the declination, or the diſtance of the Sun from the Pole bee 70 degrees: now if you adde P D the filling of the declination 70, to bee B D 7, the height of the Sun, you ſhall find 77 degr. for B P the height of the Pole.

Another Example.

If you take the height of the Sun A D 7, from H D 20 the declination of the Sun, there will remain 13 for H B, & ſo much is the Equinoctiall in the north depreſſed under the Horizon, which if you ſubſtract from H P 90, there remaineth for A P, 77 the height of the Pole, as aboveſaid.

The 31 Point. How to find the height of the Pole by the Starres.

TO find the height by the Starres which ſtand neere the Equinoctiall, you uſe them either ſubſtracting from or adding thereto their declination, as you doe with the Sunne. And thoſe which ſtand neere the Poles you muſt either ſubſtract from or adde to their diſtances from the Pole to their meaſured height and ſo find out the height of the Pole.

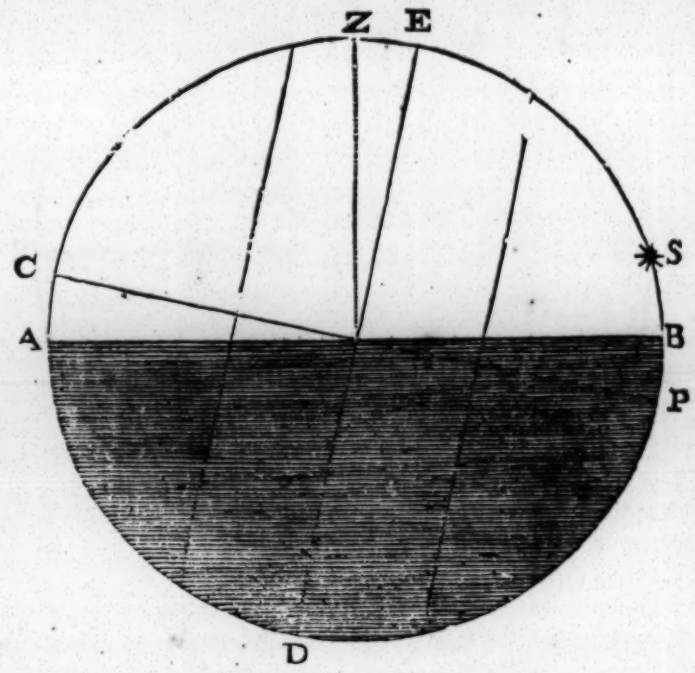


The firſt Example.

Let A B bee the Horizon, P the North Pole, E D the Equinoctiall, S the northſtarre ſtanding under the Pole, I meaſure the height of the Northſtarre S B, above the Horizon 46 degrees, and for it I find in the Table the diſtance of the Northſtarre from the Pole P S, 2 degrees 42 minutes, adding this then to the height that I find B S and maketh together 48 degrees 42 minutes for P B the height of the Pole.

The ſecond Example.

Let F bee the cleareſt of the waiters above the Poles riſen above the Horizon F B 58 degrees, then his diſtance from the Pole F B beeing ſubſtracted 14 degrees 14 minutes even as the foregoing table doth teach you, there reſteth for P B the height of the Pole 13 degrees 46 min.



If you come by Southwards the Line, and will uſe the Starres neere the Northpole, ſo may you ſubſtract the height (which you find) from the diſtance of the Starre from the Pole, and to find the depth of the North Pole under the Horizon, even to the height of the South pole above it.

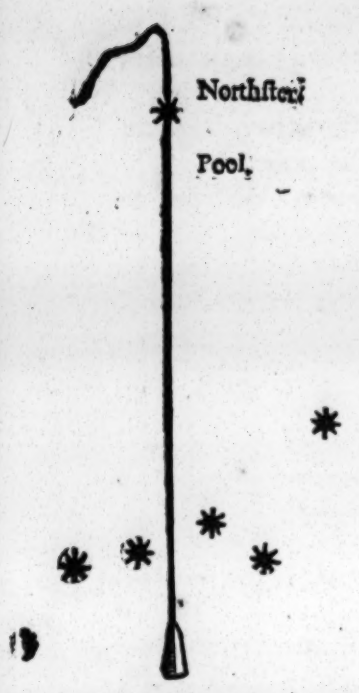
The third Example.

Let S bee the northermoſt hinder wheele of the greate wagon, his height above the Horizon in the North B S 20 degrees, which beeing ſubſtracted from S P, which is 26 degrees and 14 minutes beeing his diſtance from the Pole, here maineth over B P 6 degrees 14 min. which the North Pole is ſunke under the Horizon and to G A the height of the Southerne Pole.

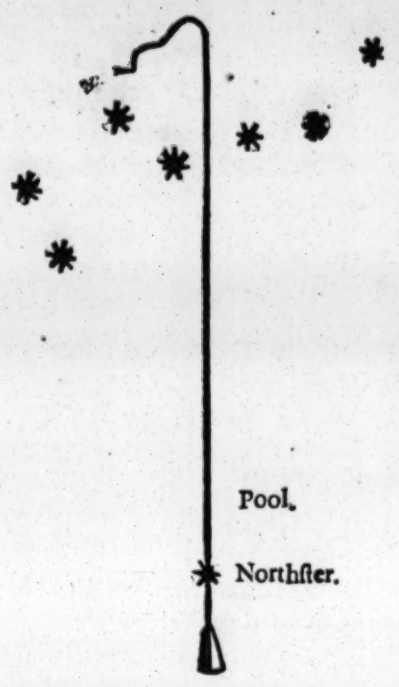
Even as the ſoutherne Starres beeing full ſouth are at the higheſt, ſo are likewiſe the Northerne in the north right above the Pole at the higheſt, or under the Pole at the loweſt, this you may well neare ſee by your eye in many which ſtand ſome what farre diſtant from the Pole, too wit, when they ſtand either above or below the Northſtarre, but not right againſt it, by reaſon that the Northſtarre it ſelfe by it owne turning about the Pole, wendeth either on one ſide or other ſome what from full North, ſoo that when you draw nearer the North, you muſt ſtill bee meaſuring to find out the right higheſt or loweſt.

Now to know when the Northſtarre is either at his higheſt or loweſt pitch, ſtill marke well the greate wagon, when that commeth under the Northſtarre, ſo that when you let a plummet line hang right againſt the northſtarre, it may likewiſe come to hang in the middle betweene the Wagon and the horſes, then is the Northſtarre right at his higheſt, above the Pole. Or when the Wagon alſo commeth above the Northſtarre, and when you let a plummet line hang through betweene the Wagon and the horſes, that that alſo hangeth right againſt the Northſtarre, then is the Northſtarre right under the Pole at the loweſt, even as ſtandeth delineated in the following Figures.

Thus

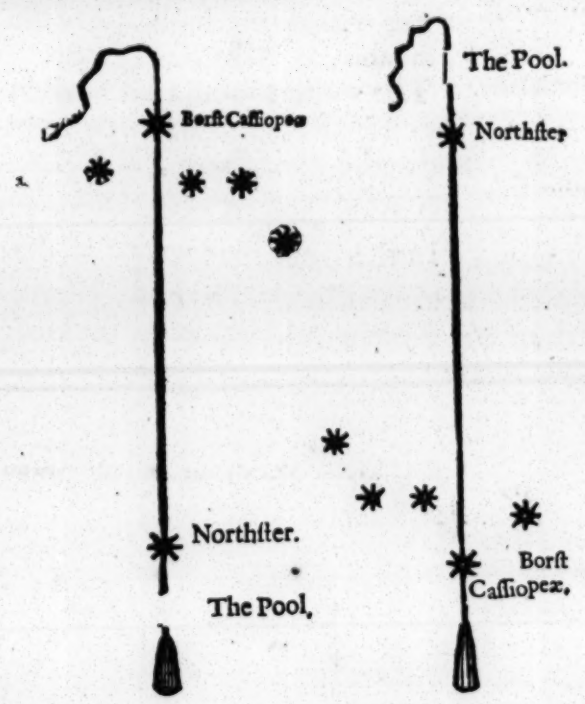


Thus is the Northſtarre right above the Pole.



Thus is the Northſtarre right under the Pole.

Or when the Starre in the Breaſt of Caſſiopeia commeth right above the Northſtarre, then is the Northſtarre above the Pole at its higheſt, & when it is right under the Northſtarre, then is the Northſtarre at the loweſt under the Pole, according to the demonſtration in theſe figures hereunder ſpecifyed.



The ſtars of the greate wagon are knowne to every one. And of the Starres of Caſſiopeia. There are 5 very cleare the principall in forme, as formerly ſtandeth expreſſed the ſecond of them that is which is fartheſt diſtant from the Northſtarre, and is in the breaſt, and ſtandeth neere upon as farre from the Northſtarre as the northermoſt fore wheele of the greate Wagon, if you hold a ſtraite ſtick upon the ſight, marke on end through betweene the Wagon and the horſes, and marke it in the midſt over the Northſtarre, and then the other end ſhall ſtretch over the foreſaid ſtarre called Caſſiopeias breaſt.

The 32 Point. The uſe of the North ſtarre when you take the height by the wayters which are on the northern hinderwheele of the great Wagon.

FOr as much as many Pilots know not the names of many of the fixed ſtarres, and therefore follow the uſe of the north ſtarte according to the points of the compaſſe: we have for the uſe for theſe men, made two ſorts of tables the one according to the waters (which we have mended,) the other according to the northern hinder wheele of the great Wagon, both of them on the foure ſtrokes north, ſouth, eaſt and weſt, and in as much as in this kinde or worke the north ſtar hath a different ſtanding in ſundry heights of the Pole, we have calculated the tables agreeing to divers heights or latitudes from 10 degrees to 10 degrees as followeth.

At the height of 10 *degrees.*

When the brighteſt of the wayters ſtandeth in the
- Eaſt, then is the north ſtar under the pole 1 deg. 28 min.
- North, then it is 2 degr. 28 minutes under the pole.
- Weſt 1 degree, 22 min. above the pole.
- South 2 degrees, 18 min. above the pole.

At the height of 20 *degrees.*

Wen the brighteſt of the wayters ſtandeth in the
- Eaſt, the n. ſtar is 1 degree, 31 min. under the pole.
- North, the n. ſtar is 2 degr. 18 min. under the pole.
- Weſt, the n. ſtar is 1 degr. 19 min. above the pole.
- South, the n. ſtar is 2 degr. 19 min. above the pole.

At the height of 30 *degrees.*

When the brigheſt of the wayters ſtandeth in the
- Eaſt, the n. ſtar is 1 degr. 35 min. above the pole.
- North, the n. ſtar is 2 degr. 18 min. under the pole.
- Weſt, the n. ſtar is 1 degr. 14 min. above the pole.
- South, the n. ſtar is 2 degr. 19 min. higher then the pole.

At the height of 40 *degrees.*

The wayters in the
- Eaſt, the n. ſtar 1 degree, 39 min. under the pole.
- North, the n. ſtar 2 degr. 17 min. below the pole.
- Weſt, the n. ſtar is 1 degr. 10 min. above de pole.
- South, the n. ſtar is 2 degr. 19 min. above the pole.

At the height of 50 *degrees.*

The wayters in the
- Eaſt, the n. ſtar is 1 degr. 44 min. below the pole.
- North, the n. ſtar is 2 degr. 17 min. below the pole.
- Weſt, the n. ſtar is 1 degr. 3 min. above de pole.
- South, the n. ſtar is 2 degr. 20 min. above the pole.

At the height of 60 *degrees.*

The wayters in the
- Eaſt, the n. ſtar is 1 degr. 52 min. under the pole.
- North, the n. ſtar is 2 degr. 16 min. below the pole.
- Weſt, the n. ſtar is 53 min. higher then the pole.
- South, the n. ſtar is 2 degr. 20 min. above the pole.

At the height of 70 *degrees.*

The wayters in the
- Eaſt, the n. ſtar is 2 degr. 5 min. under the pole.
- South, the n. ſtar is 2 degr. 15 min. under de pole.
- Weſt, the n. ſtar is 32 min. above the pole.
- South, the n. ſtar is 2 degr. 22 min. above the pole.

At the height of 80 *degrees.*

The wayters in the
- East, the north ſtar is 2 degr. 33. min. under the Pole.
- North, the north ſtar is two degr. 12 min. under the Pole.
- Weſt, the north ſtar is 33 min. under the Pole.
- South, the north ſtar is 2 degrees 44 min. higher then the Pole.

The uſe of the North ſtarre, agreeing with the northermoſt hinder wheele of the Wagon.

At the height of 10 *degrees.*

When the northermoſt Wheele of the wagon ſtandeth in the
- East, then is the n. ſtar higher then the Pole 1 degree, 1 min.
- North, the n. ſtar is two degrees 27 min. above the Pole.
- Weſt, the n. ſtar is 1 degree, 13 min. lower then the Pole.
- South, the n. ſtar is under the Horizon out of ſight.

At the height of 20 *degrees.*

The northern wheele of the Wagon.
- East, the n. ſtar is 54 min. higher then the Pole.
- North, the n. ſtar is 2 degr. 27 min. under the Pole.
- Weſt, the n. ſtar is 1 degree, 19 min. lower then the Pole.
- South, the n. ſtar is 2 degr. 27 min. above the Pole.

At the height of 30 *degrees.*

The Northermoſt hinder-wheele of the Wagon.
- East, the n. ſtar is 47 min. higher then the Pole.
- North, the n. ſtar is 2 degr. 27 min. under the Pole.
- Weſt, the n. ſtar is 2 degree, 26 min. above the Pole.
- South, the n. ſtar is 2 degree, 27 min. under de pole.

At the height of 40 *degrees.*

The Northermoſt hinder wheele.
- East, the n. ſtar is 38 min. above the pole.
- North, the n. ſtar is 2 degr. 27 min. under the pole.
- Weſt, the n. ſtar is 1 degree, 34 min. below the pole.
- South, the n. ſtar is 2 degr. 28 min. above the pole.

At the height of 50 *degrees.*

The Northermoſt Wheele.
- East, the n. ſtar is 24 min. above the pole.
- North, the n. ſtar is 2 degree, 26 min. under the pole.
- Weſt, the n. ſtar is 1 degree, 45 min. under the pole.
- South, the n. ſtar is 2 degree, 28 min. above the pole.

At the height of 60 *degrees.*

The Northermoſt hinder Wheele.
- East, the n. ſtar is 2 minutes above the pole.
- North, the n. ſtar is 2 degree, 26 min. under the pole.
- Weſt, the n. ſtar is 2 degr. 1 min. under the pole.
- South, the n. ſtar is 2 degree, 28 min. above the pole.

At the height of 70 *degrees.*

The Northern hinder Wheele.
- East, the n. ſtar is 41 min. under the pole.
- South, the n. ſtar is two degr. 25 min. under the pole.
- Weſt, the n. ſtar is 2 degree, 22 min. under the pole.
- South, the n. ſtar is two degr. 29 min. above the pole.

At the height of 10 degr. the n. hinder Wheele of the great Wagon cannot come from the Horizon at the ſame height with the northſtarre.

A Declaration of the Eaſt, Weſt, South, and Northerne Waiters, and of the great Wagon.



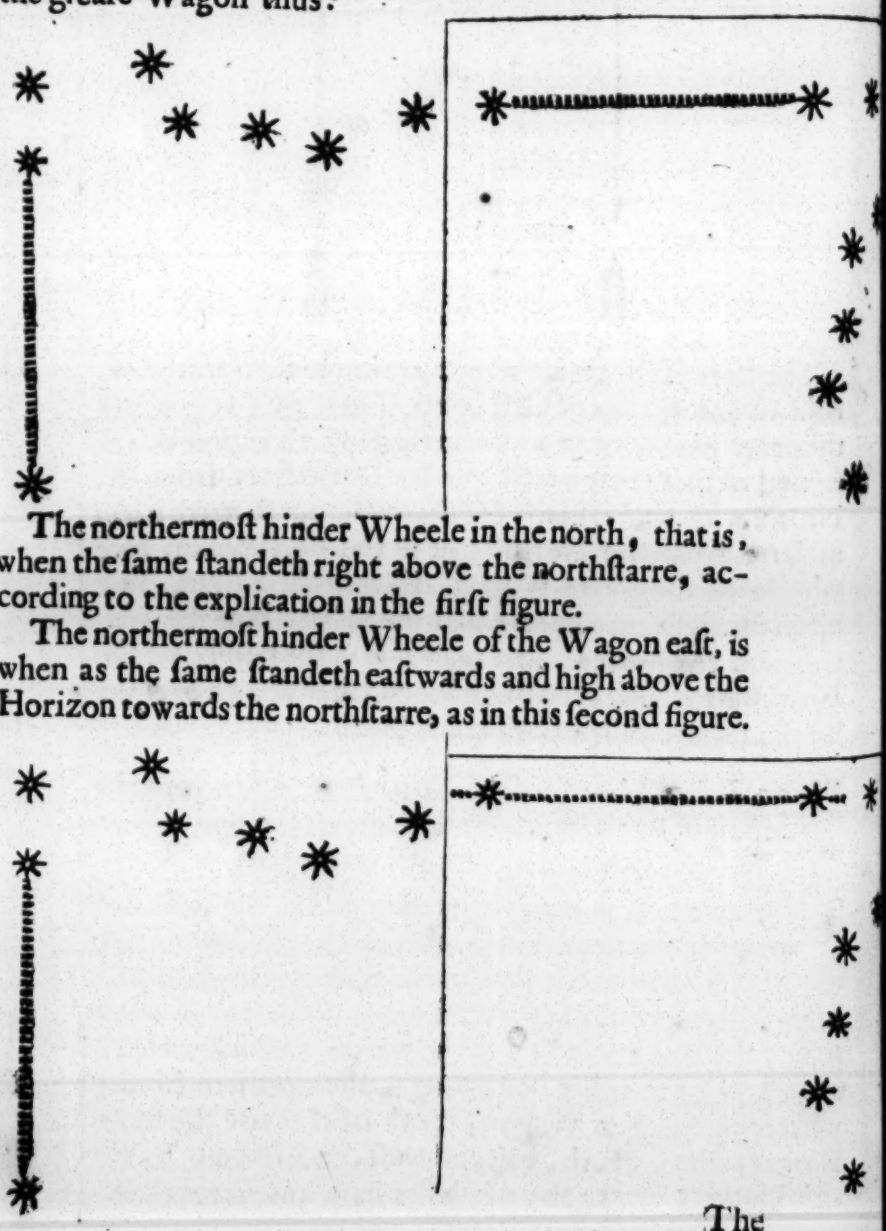
The waiters Eaſt, that is when the cleareſt or middlemoſt ſtandeth towards the eaſt, and higher above the waiters Horiſon then the northſtarre, according to the explication of the firſt figure.

The Waiters north, that is when the cleareſt ſtandeth right above the northſtarre, even as in the ſecond figure.

The waiters weſt, that is when the middlemoſt of the waiters, ſtandeth towards the weſt, and there withal one high above the Horiſon, as in the third figure.

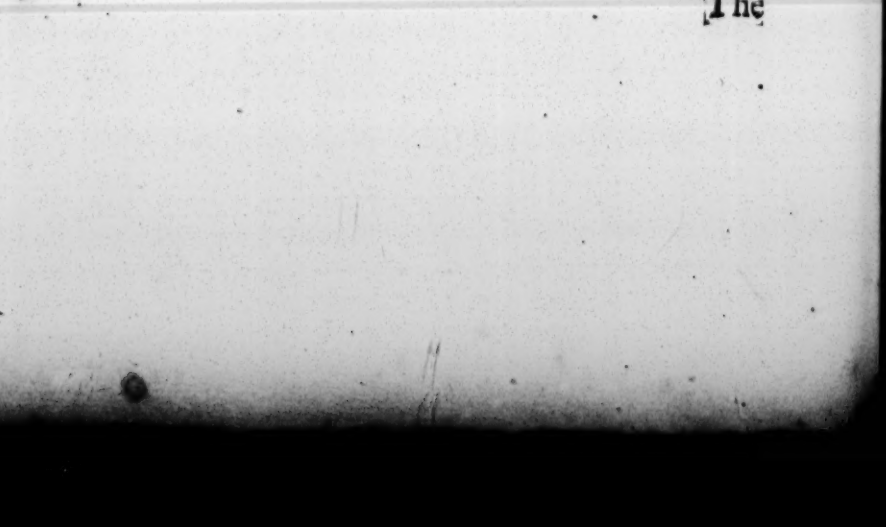
The waiters ſouth, that is when the cleareſt of them ſtandeth right under the northſtarre, as in this fourth figure.

In the ſame manner as of the waiters, ſoo is alſo to bee underſtood. The Eaſt, Weſt, South and north of the Northermoſt hinder Wheele of the greare Wagon thus:



The northermoſt hinder Wheele in the north, that is, when the ſame ſtandeth right above the northſtarre, according to the explication in the firſt figure.

The northermoſt hinder Wheele of the Wagon eaſt, is when as the ſame ſtandeth eaſtwards and high above the Horizon towards the northſtarre, as in this ſecond figure.



The

The ſame hinder wheele of the Wagon in the ſouth is when it ſtands right over the Northſtarre even as in the third figure.

And in the Weſt, when it ſtandeth Weſtwards and high towards the Northſtarre above the Horiſon as is ſeene in the fourth figure.

The uſe of the foreſaid Table.

You muſt ſtay till you have the cleareſt of the waiters, or the northermoſt hinder wheele of the greate Wagon, upon any of the foreſayd Points, then you take the height of the North ſtarre above the Horiſon. The height beeing ſound with the queſſing together. You may then ſomething nearely know the height of the Pole. Then you can ſufficiently find out of the foreſaid Tables how much the Northſtarre is higher or lower then the Pole. Is it higher, then you muſt ſubſtract from, but is it not lower you muſt adde that to the meaſured height, and ſoo come to find the right height of the Pole.

Theſe foreſaid Tables are reckoned all from 10 degrees to 10, and when you are betweene ſuch heights ſoo ſhall you (comming upon other heights) take notice, how many degrees you are either above or under theſe reckoned Poles. And therewithall how greate the difference is betweene ſuch two, ſeeing wee find, that have obſerved it, you take from the difference according to the reaſon of the height where you are, leſſe or more from the foreſaid numbers, adding that to or ſubſtracting from, even as the cauſe requireth.

The firſt Example.

In the height of 46. I deſire to know how much the North ſtarre ſtandeth lower then the waiters ſtand in the eaſt, obſerving. How great the difference is betweene the height of 40 and 50 degrees, I find 5 minutes increaſing, I ſay therefore 10 degrees difference in height giveth 5 minutes, what amounteth 6 degrees to, facit 2 minutes, that beeing added by the 1 degree 39 minutes which I find on the Table over againſt 40 degrees becauſe the difference is increaſing from 40 towards 50 degrees, and ſo I finde it 1 degree 42 minutes.

The ſecond Example.

In the height of 48 degrees, I deſire to know, how farre the North Starre ſtandeth too high, when the moſt northerly hinder wheele of the Wagon ſtandeth Eaſt, the difference in the Table betweene 40 and 50 degrees height is 14 minutes leſſening, I ſay therefore if 10 degr. differ in height 14 minut. what ſhall 8 degr. doe, facit full 11 minutes, theſe beeing ſubſtracted from 38 minutes ſtanding right againſt 40 degrees height, now becauſe that the difference of 40 to 50 degrees leſſeneth, I find 27 minutes which the Northſtarre ſtandeth too high upon the aforeſayd 48 degrees.

The 32 *Point.* Concerning the elevation of the heavenly Lights through the Damps.

TIs knowne by experience that Sonne, Moone, and all the Starres approaching the Horiſon, ſeeme alſo to bee more and more high then in truth, they are the cauſe whereof wee ſuppoſe to bee the damps, which continually, (through the warmth of the waters and the earthly moiſtures) riſe from the earth, which how nearer they are to the Horiſon are ſoo much the thicker, and thereby the lights ſoo much the more ſeeme to bee higher. The nearer you come to the Pole, ſo much the more damps, and thereby the elevation of the heavenly lights above their places are the greater. The famous Aſtronomer Tycho Brahe hath by correct obſervation found it in his Clime in the latitude of 55 degrees 56 minutes even as theſe following tables teach you.

The Table of the Sunnes Elevation.

The Sun high	0 degrees	34 minutes	higher then it is really.
	1 degrees	26 minutes	
	2 degrees	20 minutes	
	4 degrees	15 minutes	
	7 degrees	13 minutes	
	10 degrees	10 minutes	
	16 degrees	7 minutes	
	23 degrees	3 minutes	
	32 degrees	1 minutes	

(appeareth)

The Table of the Starres Elevation.

The ſtars high	0 degrees	30 minutes	higher then they are indeed.
	1 degrees	22 minutes	
	2 degrees	15 minutes	
	4 degrees	11 minutes	
	7 degrees	8 minutes	
	11 degrees	5 minutes	
	15 degrees	3 minutes	

(appeare)

The uſe of the foreſaid Tables of Elevation.

IF you meaſure the Sonnes height above the Horiſon leſſe then 32 degrees you muſt ſubſtract ſoo much as the Table teacheth you on the number of the height you have found: If you meaſure the diſtance of the Sonne from the Zenith more then 58, on the contrary you ſhall adde as much too as the Table beſides the ſuppliment to 90 from the meaſured diſtance from the Zenith, teacheth. But the Sunne being more then 40 degrees above the Horiſon and 50 degrees from the Zenith, theſe exaltations and elevations come to nothing.

The firſt Example.

I meaſure the height of the Sonne above the Horizon 4 degrees, the Table of Elevations of the Sonne pointeth mee the Sonne to appeare 15 minutes higher then in truth it is, & draw then thoſe 15 minutes off from my meaſured height, & I doe keepe for the true height of the Sunne 3 degree 45 minutes.

The Second Example.

I meaſure the diſtance of the Sunne from the Zenith 74 degrees, the ſupplement thereof to 90 is 16 degrees thereby in the Table of the Sonne, I find 7 minutes which I adde to the diſtance I meaſured and ſoo I find for the right diſtance 74 degrees 7 minutes.

Even as it is ſayd of the Sonne, according to the Table of the Sonne, ſoo muſt you alſo doe with the Starres according to the Table of Starres.

The firſt Example.

I meaſure in the North upon the lowneſſe of the middlemoſt Horſe on the greate Wagon 7 degrees above the Horiſon, beſides that I find in the Table of Starres 8 minutes, which beeing ſubſtracted from the meaſured height, I detaine for the true height 6 degrees 52 minutes.

The Second Example.

I meaſure the diſtance from the Zenith of the Conſtellation which wee call the greate Dogg 86 degr. the ſupplement thereof to 90 is 4, even beſides that I find in the Table 11 minutes, which beeing joyned by the diſtance you found, I find it 86 degrees 11 minutes.

The 33 *Point.* Of the CARD.

IT is knowne to every man, eſpecially to thoſe that underſtand the grounds of Coſmographie, that the earth

earth with the waters make one compleate round body, & therefore it cannot be, that you ſhould ſet forth the ſame perfectly in a plane or Carde (either in the hole or in part) but there will bee ſome want, for it is unpoſſible to make a plaine agree with a round forme in all the parts thereof. So that your common cardes many times fayle in truth, eſpeciall thoſe that comprehend great and long voyages by ſea, and far from the Equinoctiall; but the Maps which are commonly uſed in this Countrey, of the Eaſterly and Weſterly Navigation, are without fault, or at leaſt the errors are ſo little that they hinder not.

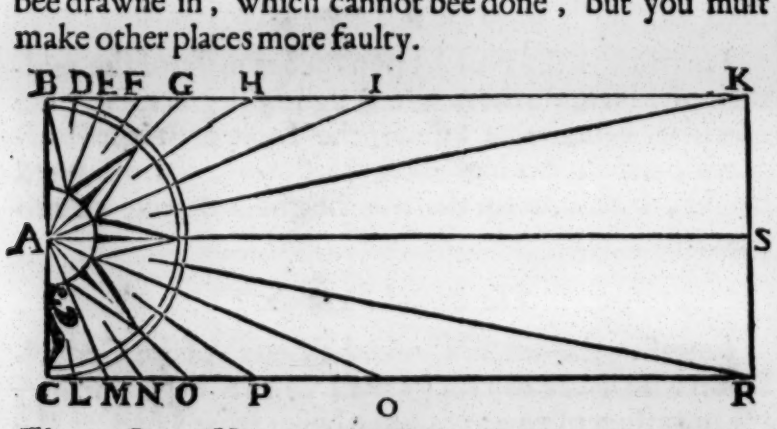
They are very fit inſtruments to bee uſed at ſea, and our forefathers, which have invented them, have brought no ſmall profit and utility to Mariners. The fault of them conſiſts in this, and thus it may bee ſeene: If you would fayle a triangle, the 2 firſt ſides will bee fayled on their ſtrokes and diſtances, but from the 2 to the 3 place (that is the 3 ſide of the triangle) it will fayle both on the ſtrokes and diſtances.

Example.

I fayle from the Lizard a ſtraight courſe to the Ilands of Canary, and from thence againe to the Ilands of Corvo and Flores, on which foreſayd ſtroks and diſtances many Maps are very complete and perfect. But if I would fayle againe from Corvo to the Lizard, from whence I firſt ſailed, the Card will ſhew mee an imperfect way, to wit, it will ſeeme farther wide in the Card, then indeed it is, alſo it will differ on the point of the Compaſſe: ſo that you muſt direct your courſe more northerly then that which your Card directeth.

In ſoo ſhort a journey, as this above ſaid, it is not much obſerved, neither is it worth the obſervation: but thoſe that ſail to the Weſt-Indies, ſhall ſoone perceive it; when they ſet fayle, they take their courſe far to the ſouth, and there they finde their Cards of a fit length, becauſe the Cards are fitted to it; But in their returne, when they take their courſe northward, they finde the way much ſhorter then their Cardes ſhew them.

This is the cauſe: All the lines in the Card from north and ſouth are drawne every where at an equall diſtance each from other, from the Equinoctiall to the Pole; but on a globe which is made round like the earth, they are not of an equall diſtance, but the more northerly they come, ſo much the nearer they come each to other. So that two ſtrokes from north to ſouth at the latitude of 60 degrees, are but halfe ſo wide from one another, as they are at the Equinoctiall, and at the Pole they touch each other. Therefore two ſhipps being under the Equinoctiall diſtant from one another two hundred leagues, they may both fayle directly north without hinderance, comming to the height of 60. gr. but being 100 leagues from each other, and that following the ſame courſe, they would in the end meet each other under the pole, but if you direct ſuch two ſhips by a plaine Carde, they will bee alway at places lying far north, are much too wide, unleſſe they bee drawne in, which cannot bee done, but you muſt make other places more faulty.



The 34. *Point.* How many miles or leagues you muſt fayle on every point of the compaſſe before you ſhall get a degree in breadth of the land.

WHen you fayle right ſouth or right north on any one point of the compaſſe, as from A to B or C, you fayle for a degree 15 leagues.

And you ſtay under the ſame Meridian.

On the point north and by eaſt, or ſouth and by eaſt, as from A to D or L, you fayle for a degr. 15 & a halfe deg.

And then you are out of the Meridian whence you fayled, as it were from B to D 3 leagues.

Northnortheaſt and ſouthſoutheaſt, as from A to E or M, for a degree 16 leagues.

You are from the Meridian whence you fayle 6 leagues as from B to E.

Northeaſt and by north, and ſoutheaſt and by ſouth you fayle as from A to F or N 12 leagues.

You ſhal be without the ſame line as from B. to F. 10 leag.

Northeaſt and ſoutheaſt, you fayle for a degree as from A to G or O 21 leagues.

You are then off the north and ſouth line whence you fayle as it were from B to G or C O 15 leagues.

Northeaſt and by eaſt and ſoutheaſt and by eaſt, as from A to H or P for a degree 27 leagues.

You are then out of the firſt Meridian, as from B to H, or C P 22 leagues.

Eaſtnortheaſt or eaſtſoutheaſt, you fayle for a degree as from A to I or Q 39 and a halfe league.

You ſhall bee out of the Meridian, as from B to I or from C to Q 36 leagues.

Eaſt and by north or eaſt and by ſouth, as it were from A to K or R you fayle for a degree 77 leagues & a halfe

Then are you out of the Meridian, as from B to K, or from C to R. 75 leagues.

Eaſt or Weſt, as from A to S, you remaine between the Pole and Equinoctiall on the ſelfe ſame breadth of the earth or land.

The 35 *Point.* Of variation of the Compaſſe, and how you ſhal find the turning aſide of the needle or variation.

THe needle or the ſtile under the Compaſſe, touched with the Load-ſtone, draweth to divers places diverſely, in ſome places directly to the north, in other places it wendeth to the eaſt, and in other towards the weſt; As for Example, at the Ilands of Corvo and Flores, the moſt weſterne of the Flemiſh Ilands. At Helmſhuy a little on the weſt ſide of the north Cape. About 30 leagues weſtwards from the ſouth corner of Spitsburg, on the eaſt ſide of the Cape of good Hope, at Cabo das Aguilhas, and at other places, as well in the Eaſt as in the Weſt-Indies, the needle directeth you juſt north. Weſtwards from the Flemmiſh Ilands on the eaſt ſide of the Cape, at Nova Zembla, on the coaſt of Spitsburgh, and on the eaſt ſide of Cape das Aguilhas on all the Indian Sea, it ſtandeth from the north Weſtwards, and in the eaſt ſide of the Flemmiſh Ilands, on the weſt ſide of the Cabo de Bona Eſperance and other places more, it ſtandeth from the north eaſtwards. The variation of the needle is two-fold, to wit, from the north to the weſt, and from the north to the eaſt, and the ſouth are againe of two ſorts, the increaſing & decreaſing weſtward, in like for the increaſing and decreaſing eaſtwards. The increaſing eaſtward and weſtward, is, as you fayle from eaſt to the weſt, increaſing & diminiſhing, that which decreaſeth, may he plainely underſtood by this Example.

1 *Example.*

If you fayle from the Ilands Corvo and Flores, where the needle ſtandeth right eaſtward on the coaſt of Spaine, the needle beginneth by litle and little ſo much the more, to wind toward the eaſt, until you have fayled the Strait of Gibraltar, where it is at the higheſt (as they hold) 13 gr. that is increaſing northeaſtering.

From thence fayling alongſt the Middle-lands Sea, it beginneth to decreaſe, untill you come at the place, called the Mouth of the Venetian Gulfe, where it vaniſheth, and the needle againe draweth directly north, this they call decreaſing north eaſtering.

2 *Example.*

If you fayle from the Cabo das Aguilhas (where the needle

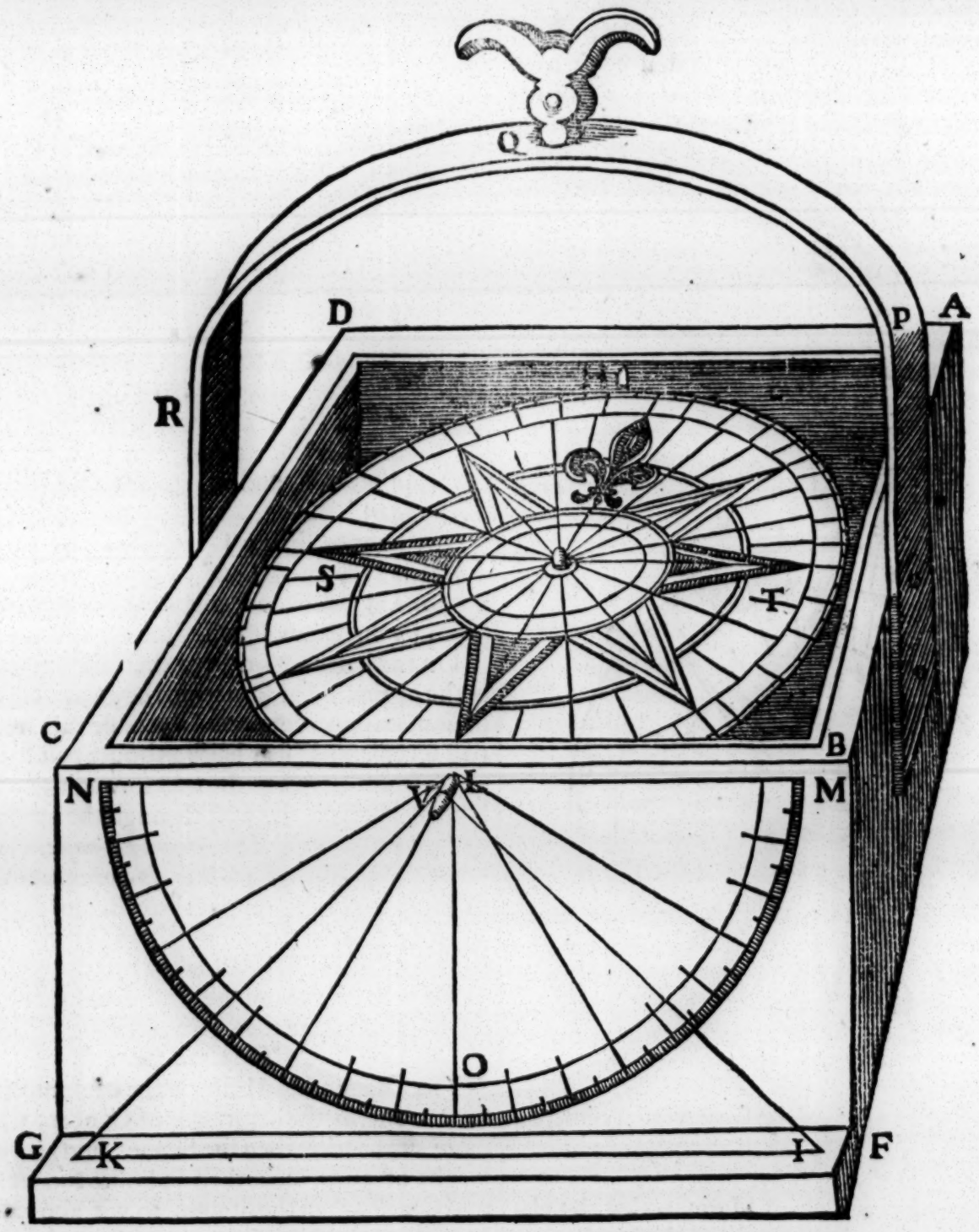
needle ſtandeth directly north) eaſtwards to the Indies the needle beginneth to decline from the north towards the weſt, untill you come a little on the eaſt ſide of the Iland S. Brandaon, where it is at the height of 22 gr. or two whole ſtrokes that is increaſing northweſtering.

Sayling from thence, you begin to decreaſe, till you are at the ſouth point of Celebes, where againe the needle draweth right, this is called decreaſing northweſtering.

For the common navigation from this Countrey to the eaſt, north, England, France, or Spaine the ſtiles (to direct the Lilly right north) ſet faſt under the roſe, about two third parts from the ſtroke, from the north to the eaſt. The ſtretching and courſe of the one Country towards the other in the common Cards, are drawne by ſuch a Compaſſe, ſo that you may ſayle it without altering of the Compaſſe or ſhaking any other reckoning or account.

In great journies, when the needle declineth ſometime to the weſt, and ſometime to the eaſt, a ſtroke or two, or more, it is neceſſary to obſerve it ſharply, over what ſide, and how much it ſtandeth from the north, that you may be certaine, what courſe you ſhall hold in ſailing.

To find the declining of the compaſſe, that is, how much the lilly ſtandeth to the eaſt or the weſt, ſeek firſt the juſt north (that by it you may know the declining) thus make a box quadrangle, or foure cornered, and reaſonable deep, as it followes A B C D E F G, in the midſt of it under in a glaſſe let the Compaſſe ſwimme on a pinne, ſo that it bee round about at an equall diſtance from the box, as S T, divide that on the outermoſt corner of the Roſe into foure times ninety degrees, and lay the needle juſt under it, even as in the compaſſe that you follow in ſayling. Within on the one ſide of the box, which wee call the north ſide, make a ſharp coper or braſen corner or edge, juſt in the midſt between A and D, lifted upon the ſide A D, ſo that the compaſſe may paſſe cloſe by it without let, as H, without on the ſouth ſide B C F G, at the under corner make a little beame, as F G, about halfe an inch broad at the upper-edge, in each ſide make a hole at I and K, both equally diſtant from the flat B C F G, at the under corner make a little beame, as F G, from the one to the other a right line which may bee plainly ſeene, as I K; at the upper-edge in the middeſt betweene B C, make a pinne as long as the underbeame, like L, and juſt ſo farre as the line I K on the beame ſtandeth from the flat, juſt ſo far make from the flath a ſcoach in the foreſaid pinne L, after that make a ſtring or a ſmooth cord faſt to each end in the foreſaid holes of the little beame as at I K, and with the midſt of the foreſaid pinne at V, ſo that the ſtring being ſtretched hard, may ſtand at an equall diſtance from the flat in all places B C F G, from the point L make a halfe circle, a little lifted out of the flat, as M D N, ſo that the line M N be equally diſtant at all points with the upper-edge of the box, or the beame and the line L O (deviding the halfe circle into two quadrants) ſquare right



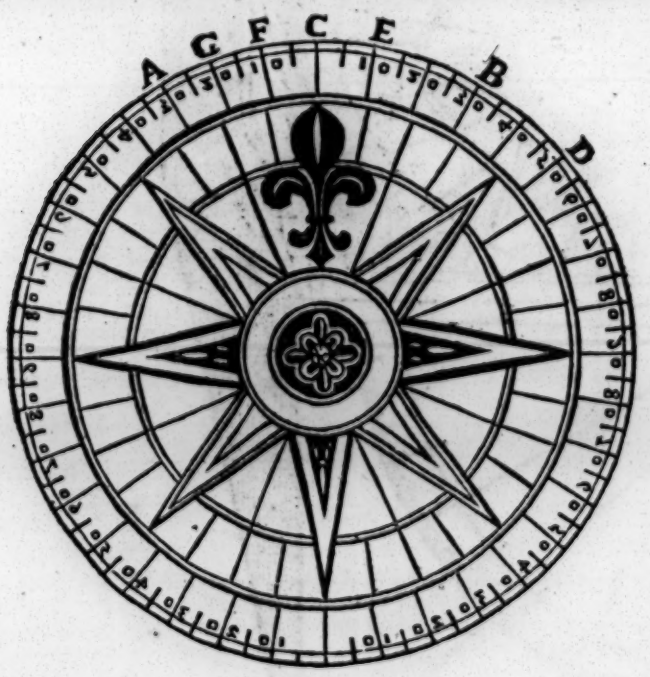
on I K, divide the halfe circle at the inner corner in twice ninety degrees.

Laſtly, make a ring of braſſe or wood as P Q R, that you may hang the box on it, that the uppermoſt flat A B C D may hang Water-compaſſe, the ſouth ſide B C F G, and the edges B F C G, and the Line L O juſt in the lead, this being thus prepared, the uſe followeth.

Three or foure houres before noone, more or leſſe you

 ſhall

ſhall turne the corner C G, towards the Sunne, ſo that the ſhaddow of the one ſide of the ſtring L K may fall right along the line K I, and then looke the degree of the Compaſſe which commeth to ſtand by the braſen edge H, which I ſuppoſe to bee the 30 degrees of north and by Weſt, as in the ſecond Figure following at A. At the ſame inſtant, you ſhall obſerve the height of the Sunne at the ſhaddow of the pinne L, in halfe circle M O N, or you ſhall take it more truely and certainly with the croſſe ſtaffe or Aſtrolabe, that which wee take here to be 25 gr. we ſet it down for memories ſake. Further you ſhall ſtay ſoo long in the afternoone, untill the Sunne bee come to the ſame height of 25 gr. then turne the edge B F, juſt againſt the Sunne, ſo that the ſhaddow of the ſide of the ſtring L I may fall right along the line I K, and look what degree of the compaſſe commeth to ſtand by the coper or braſen edge H, which I ſuppoſe to bee the 30 gr. for the north, toward the eaſt, as on B, this being ſo in the middeſt of the circle A B, as at C, is the north point which you deſire, and if the Lilly bee directed right to it, then hath that compaſſe no variation, but directeth right north. But if your taking aforeſaid in the afternoone bee not found the thirtieth, but the fiftieth degree from the north towards the eaſt, as at D, in ſuch a cauſe you ſhall devide the circle A D, being 80 gr. at E, into two parts, ſo that A E and E D may each of them contayne 40 gr. which being ſo, E will bee the north point, and ſuch a compaſſe turneth from the north to the weſt from E to C 10 gr. which is very neare a whole ſtroke. But if in the foreſaid taking in the afternoon the coper or braſen edge hath ſtood 10 gr. on the Weſt ſide of the Lilly or flour deluce, as at F, then you muſt devide the circle A F, containing 20 into two parts at G; ſo that A G and G F might each of them containe tenne degrees, which being ſo, G will be the north point, and the Lilly of ſuch a compaſſe windeth toward the eaſt from the north 20 gr. namely from C to G, and thus it will bee in all other figures. This is to bee obſerved: that you may take the height before the noon twice, thrice, foure times or more, at divers heights of the Sunne; As for Example: The firſt time when the Sunne is at the height of 10 gr. the ſecond time at the height 15 gr. the third at 20 gr. and in the afternoone at the ſame height and by comparing the one taking with the other, you ſhall finde how then agree each

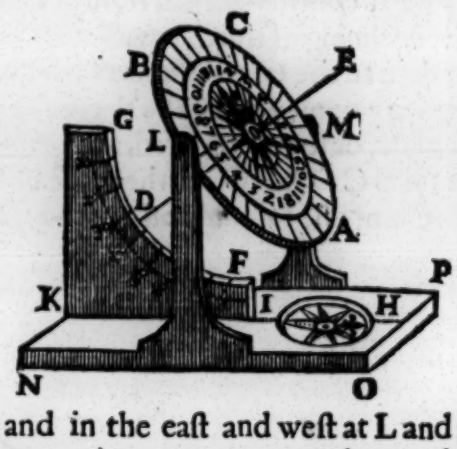


with other, thus finding alwayes the ſame north point, you ſhall be certaine that you have taken it truly & right

Of the Tides.

IT is knowne to all experienced Mariners that the ebbing and flowing of the ſea is governed by the Moone, ſoo that every new and full Moone the waters are higher which they call ſpring-tydes, and at the quarter of the Moon the waters are loweſt: ſo that you may know and that certainly by former obſervation, (although the true and reall cauſe thereof is yet hidden from us) the houre of the tyde, and on what point or ſtroke the moone maketh high water in any particular place, to the great profit and furtherance of navigation.

To know on what ſtroke the Moone is, it may be done in a two-fold manner, by the ſight, or by marking how old the Moone is; to looke at ſome ſtroke of the Compaſſe, it may not be done according to the common Compaſſe lying flatte or driving water Compaſſe, becauſe the Horizon divideth only into equall ſtrokes, and ſheweth in what virticall Circle or Azimuth the Sunne or moone ſtandeth, but by a compaſſe that (being lifted up) according to the Superficiall part of the Equinoctiall, devideth the Equinoctiall in equall parts, as the common flatt two driving doth the Horizon, ſuch an Equinoctiall compaſſe is made in this manner as you ſee in this figure: where the roundell A B C ſheweth the flatt of the Equinoctiall, the gnomen E D the axeltree of the world. The foreſaid rondel in B marked on both ſides, in the inſide with the Compaſſe, and on the edge of the outſide with twice



24 houres and in the eaſt and weſt at L and M hanging on two pinnes as it were on an axeltree, ſo that theſe being turned up and downe, and the gnomen ſet and the nether end by D and by the Quadrant F D G, that you may place him at the height of any pole.

If you ſet ſuch a Compaſſe with the bottom water compaſſe, the line H K juſt north and ſouth, to wit, H to the north and K to the ſouth, and the lower end of the gnomen by ſuch a degree of the Quadrant F C, according to the height of the Pole where you are: there will the roundell A B C, ſtand even with the ſurface of the true Equinoctiall, and the gnomen E D with the axeltree of the world.

The ſight on ſuch a Compaſſe, and a common one, differeth very much, and by how much nearer the Equinoctiall ſoo much more will the difference bee, as will appeare by this example following. *The firſt Example.*

On the height of 50 gr. or thereabout, the Sunne being in the beginning of Cancer in the greateſt northerly declination, it is on a common Compaſſe eaſt at halfe an houre paſt ſeven, and weſt at halfe an houre paſt foure, that is: he goeth from the eaſt to the weſt through the ſouth in nine houres, but from the weſt through the north to the eaſt in 15 houres. *The Second Example.*

At the height of 30 degrees, hee comes little before halfe an houre paſt nine at the eaſt, and a little after halfe an houre paſt two to the weſt, and ſo it goeth in leſſe then five houres and a halfe from the eaſt through the ſouth into the weſt, but from the weſt through the north to the eaſt he goeth more then 18 houres.

The third Example.

The Dragonſhead being in the beginning of Aries, and the Moone in the beginning of Cancer, they make 5 gr. more declination then the Sunne, and go to the foreſaid height of 30 gr. more then an houre ſooner from the eaſt to the weſt, then the Sunne, to wit, about the ſpace of 4 houres, and againe from the weſt to the eaſt about the ſpace of 2 houres.

Under the line, the Sunne having noo declination, riſeth in the morning in the eaſt, and riſing remaineth eaſt untill he commeth to the Zenith and paſſeth that to the weſt,

weſt and abideth ſo deſcending weſt, till he approacheth the Horizon and is according to a flatt driving compaſſe, the one half of the day eaſt, and the other weſt, without comming on any other ſtroke; but it is not ſo on ſuch an Equinoctiall compaſſe. The Sunne and Moone both going alwayes in the ſame diſtance of time over every ſtroke, to wit, from the eaſt to the ſouth in ſix houres, and from the ſouth to the weſt in ſix houres, and againe from the weſt through the north in twice ſix houres.

The firſt Example.

Under de Line, the Sunne being in the Equinoctial, I ſet the end of the gnomen E directly north, the other end D to the ſouth at the upper-edge of the Quadrant at G on O, the gnomen E D ſhall lye water Compaſſe, like the axeltree of the world, and the roundell right in the lead upright like the true Equinoctiall there. The Sun comming above the Horizon, the ſhaddow of the gnomen ſhall direct you to the ſixt houre in the eaſt, for the riſing, but if hee riſe beyond the edge of the roundell, and devideth that in te ſame time into equall parts with the ſhaddow, being 45 gr. above the Horizon, the ſhaddow of the gnomen will direct you to the 9 houre in the ſouth, being come into the Zenith, the ſhaddow ſhall fall juſt on the lead at the twelfth houre in the ſouth, againe 45 gr. that is, deſcending halfe way the weſt, the ſhaddow ſhall be at the third houre in the afternoene in the ſouthweſt, but coming to the Horizon the ſhaddow ſhall fall on the ſixt houre in the weſt.

As this is ſpoken of the Sun, the ſame muſt bee underſtood of the moone in as much as concerneth the points or ſtrokes af the Compaſſe.

To reckon by the age of the moone, we have ſet in the table following under every ſtroke two rankes of ciphers, the firſt are the dayes of the age of the moone, or the dayes paſt ſince the moone was new or at the full. The ſecond the houres and minutes of thoſe dayes, in the which the moone comes to ſuch a ſtroke, & maketh at the place ſtanding by high water.

The ſecond Example.

Eight dayes after the moon hath beene new or at the full, I deſire to know when the moone commeth to the ſouth, at Embden, or Enckhuyſen, and ſuch like places, makes high water (for there a north and a ſouth moone makes full ſea) I ſeek under the north and ſouth ſtroke the 8 day in the 1 columne, and by that in the ſecond 6 houres, 24 minut. on that then ſhall the moone come to the north and ſouth at 6 hour 24 min. and make high water in that place.

The tyde 48 min. later every day, that is foure or five parts of an houre, then if you know at what houre the new or full moone make high water in any one place, you ſhall reckon from that firſt day every day foure or five parts of an houre later, and ſo you ſhall find the juſt time of high water or full ſea in that place.

The third Example.

When the moone is new or full, then it is at Amſterdam and Rotterdam (and whereſoever a ſouthweſt and northeaſt moone maketh full ſea) high water at three of the clocke, a day after the new or full moone at three of the clocke 24 min. two dayes after at foure of the klocke and 36 min. and foure dayes after the new or full moon at ſix of the klocke 12 minutes.

Here follow the Tables of the Water-tydes.

South, and North.

da.	ho.	mi.	
0	12	0	At the Iuttish Ilands
1	12	48	Before the Hever, Eyder, and
2	1	36	Elve, before Emden & Delfsziel, Before Enchuyſen, Horn
3	2	24	and Urck, upon all the coaſts
4	3	12	of Vlanders, upon the fore-
5	4	0	land. At Dover in the Pier, at
6	4	48	Beveſier on the ſand, at Han-
7	5	36	ton on the Kay, Before
8	6	24	Schietenburch and the Ras
9	7	12	of Blanckert.
10	8	0	At Olfernes.
11	8	48	In the conduit
12	9	36	At Jubleter in the Road.
13	10	24	
14	11	13	
15	12	0	

Falling of ſtreams upon the ſame ſtroke.

From the Neſſe to Beunen.

da.	ho.	mi.	
0	12	45	Within the Maſe
1	1	33	within the Veer
2	2	21	at Flushing
3	3	9	Neare Beviſier in Sea
4	3	57	In the Chamber
5	4	43	In Charmſey.
6	5	33	
7	6	21	
8	7	9	
9	7	57	
10	8	45	
11	9	33	
12	10	21	
13	11	9	
14	11	57	
15	12	45	

Falling of ſtreames upon the ſame ſtroke.

From Beunen to the Sont. Alſo from Eſtaple to Beunen.

South South weſt, and North Northeaſt.

da.	ho.	mi.	
0	1	30	Under the Holy Land.
1	2	18	Before the Maſe and Goeree.
2	3	6	Before the Veere.
3	3	54	at Armewe. Upon the flat be-
4	4	42	fore Rammekens. Before the
5	5	30	Wielings. On the Sealand
6	6	18	Coaſts. Before the Thames of
7	7	6	London.
8	7	54	Before Yarmouth
9	8	42	In Duyns on the Road
10	9	30	Neare the Cingle
11	10	18	On the Weſter end of Wight
12	11	6	Without Callice and Swarte-
13	11	54	In Blavet. (nes.
14	12	42	Bulline at the Land.
15	13	30	

Falling of ſtreames upon the ſame ſtroke.

From the Gravelinghen to Beunen.

South and by Weſt, and North and by Eaſt.

da.	ho.	mi.	
0	2	15	Without Fontenay
1	3	3	Without Blavet
2	3	51	Under Bulline
3	4	39	Before the Wieling
4	5	27	Before the Maſe,
5	6	15	
6	7	3	
7	7	51	
8	8	39	
9	9	27	
10	10	15	
11	11	3	
12	11	51	
13	12	39	
14	1	27	
15	2	15	

Falling of ſtreames upon the ſame ſtroke.

Amidſt through the Heads, from Duynkerck to Greveling

From Staples to Ecam.

From Dortmouth to Exmouth.

Southweſt and Northeaſt.

da.	ho.	mi.	
0	3	0	At Amſterdam, Rotterdam,
1	3	48	Dort and Zierickſea. Before
2	4	36	Newcaſtle, the Teſe, & Harie
3	5	24	poole, In Robinhoods bay,
4	6	12	without the Flemish bankes.
5	7	0	In the pas of Calice. Before
6	7	48	Conquet at pey marques groy
7	8	36	Armentiers, Heys, Kiliaets,
8	9	24	Porthus, the river of Bordeux.
9	10	12	On all the ſouthcoaſts of Bri-
10	11	0	tagne, Gaſcoigne, Poictu. On
11	11	48	all coaſts of Biſcaye, Galiſſien,
12	12	36	Portugale and Spaine. On the
13	1	24	weſt coaſts of Ireland, at Bo-
14	2	12	kenes or Orkeneſſe. In Hitland
15	3	0	and Fairehil.

Falling of ſtreames upon the ſame ſtroke.

From Caep de Hague to the Iland of Ornay. From Garney to Caquet, from Mylford to Ramſey. At Fawike in the Chanel. At Portland in the Sack.

Southweſt by Weſt, and Northeaſt by Eaſt.

da.	ho.	mi.	
0	3	45	between the pas of Calice &
1	4	33	the Maſe at Roan. In the
2	5	21	Sorlis, before S. Matthews
3	6	9	point. In Briſtow and Crix-
4	6	57	down. In the forde betweene
5	7	45	Heyſent. Before the Bos, at
6	8	33	S. Martens before Rochel, be-
7	9	21	fore Bronwage. At Roan. In
8	10	9	the river of Bourdeaux within
9	10	57	the chanels ſituated on the
10	11	45	coaſts of Spain, Galiſſien, the
11	22	33	Southſide of Bretaigne, Gaſ-
12	1	21	coigne, and the weſt coaſts of
13	2	9	Ireland.
14	2	57	
15	3	45	

Falling of ſtreames upon the ſame ſtroke.

From Struſaert to Deepe. From Lezart to Start. From Cape Clare to London.

Weſt Southweſt, and Eaſt Northeaſt.

da.	ho.	mi.	
0	4	30	From Texel to the pas of Ca-
1	5	8	lice in the fareway. Before
2	6	6	Humber, before Flambrough
3	6	54	& Scherenborough Abruac. In
4	7	42	Famouth, in the Mouſchole,
5	8	30	Seven Ilands, S. Pauls with-
6	9	18	out the haven, betweene
7	10	6	Garnſey and the ſeven Iſles in
8	10	54	the farewater. In the Bree-
9	11	42	ſand, without the foure. All
10	12	30	ſouth coaſts of Ireland, as Kin-
11	1	18	ſael, Corke, Jochel, Water-
12	2	6	food, and Cape de Cleare,
13	2	54	
14	3	42	
15	4	30	

Falling of ſtreames upon the ſame ſtroke. From Oſtend to S. Catelines, from Berchfleur to Struſaert. The Breeſand out and in From C. de Clare to the Iland Saltees, between London & Holmes ſo far as Briſtow, from Sorlings to Englands end, From Starre point to Portland.

Weſt by South, and Eaſt by North.

da.	ho.	mi.	
0	5	15	In Torbay and Dortmouth.
1	6	3	In Plimmouth and Fawyke.
2	6	51	In the Sea of Galles,
3	7	39	In Eſmoth.
4	8	27	In Milford.
5	9	15	At Ramſey in Wales.
6	10	3	Before Lin in England,
7	10	51	Againſt London.
8	11	39	In all havens on the South-
9	12	27	coaſts of Ireland.
10	1	15	
11	2	3	
12	2	51	
13	3	39	
14	4	27	
15	5	15	

Falling of Streames upon the ſame ſtrok.

From Iſle Bas to the Foure. From Dorſey to Caep de Cleare. From the Sorlis to Lizard. From Portland to wight to Beach or Beveſier.

Weſt and Eaſt.

da.	ho.	mi.	
0	6	0	Before Hamburgh.
1	6	48	Before Bremen.
2	7	36	Before the Maeſdeep of
3	8	24	Teſſel.
4	9	12	At Hull.
5	10	0	At Blakney and Wels.
6	10	48	Before Antwerpe.
7	11	36	Tergoes.
8	12	24	Tergouwe.
9	1	12	At Concallo and S. Malo.
10	2	0	S. Pauls in the haven.
11	2	48	Without the Sorlis in the
12	3	36	Channell.
13	4	24	
14	5	12	
15	6	0	

Falling of Streames upon the ſame Stroke.

From the Kiſcaſſes to Berchsfleur. From Englands end to Lizard.

West and by North, and East and by South.

da.	ho.	mi.	
0	6	45	Betweene Fawijck and Famouth in the Channel.
1	7	38	A midſt in the Channel,
2	8	31	At Briſtow at the Key.
3	9	9	Before S. Nicolaes and Podefſemske.
4	9	57	
5	10	45	
6	11	33	
7	12	21	
8	1	9	
9	1	57	
10	2	45	
11	3	33	
12	4	21	
13	5	9	
14	5	57	
15	6	45	

Falling of ſtreams upon the ſame ſtroke.

From the Iland Bas to Marwanen along the land.

West Northweſt, and East Southeaſt.

da.	ho.	mi.	
0	7	30	At the Neſſe by Wieringen, in Texel in the Coopvaerders Roade.
1	8	18	At Kilduyn.
2	9	6	In the middle of the channel in the Fareway.
3	9	54	Neare Goutſtert in the Channell.
4	10	42	And betweene Mouſchole & Famouth in the Sea.
5	11	30	Neare Plymmouth in the Sea.
6	12	18	At Lizart by the Land.
7	1	6	
8	1	54	
9	2	42	
10	3	30	
11	4	18	
12	5	6	
13	5	54	
14	6	42	
15	7	30	

Falling of ſtreames upon the ſame ſtroke.

From the Iland. Briack to S. Malo. From Bergfleur to Seynhead.

Northweſt by West, and Southeaſt by East.

da.	ho.	mi.	
0	8	15	Without the Kiſcaſſes in the channell.
1	9	3	By Wight in the Channel.
2	9	51	From Wight to Beviſier by the Land.
3	10	39	Upon the Weſt Coaſt of the Foreland
4	11	27	Without the Flye.
5	12	15	
6	1	3	
7	1	51	
8	2	39	
9	3	27	
10	4	15	
11	5	3	
12	5	51	
13	6	39	
14	7	27	
15	8	15	

Falling of ſtreames upon the ſame ſtroke.

Behinde Garnſey in the fare water. Within the ſeven Ilands.

Northweſt, and Southeaſt.

da.	ho.	mi.	
0	9	0	Before the eaſt & weſt Eemſes.
1	9	48	
2	10	36	Before the Flye.
3	11	24	Before the Scholbalgh.
4	12	12	On al the Freeſe coaſts.
5	1	0	Upon the Fraeſe and Wieringer Flack.
6	1	48	
7	2	36	Before Crammer winterduyn and Yarmouth.
8	3	24	Within the Seyne.
9	4	12	At the eaſt end of Wight.
10	5	0	In the Raſſe of Portland.
11	5	48	Betweene Garnſey and the Kiſcaſſes.
12	6	36	
13	7	24	
14	8	12	
15	9	0	

Falling of ſtreames upon the ſame ſtroke.

In the wyke of Benyte. Betweene Morliax and the Treaclo pots.

Northweſt by North, and Southeaſt by South.

da.	ho.	mi.	
0	9	45	The Needles of Wight.
1	10	33	In the Channel by Wight.
2	11	21	The Kiſcaſſes.
3	12	9	At Garnſey in the Channel.
4	12	57	Neare Leyſtaff & Yarmouth without the banks.
5	1	45	At Tergouwe.
6	2	33	At the wolfs-horne.
7	3	21	
8	4	9	
9	4	57	
10	5	45	
11	6	33	
12	7	21	
13	8	9	
14	8	57	
15	9	45	

Falling of ſtreames upon the ſame ſtroke.

Before Concallo, before the Iland of S. Michael in the Creek.

Northweſt and Southſoutheaſt.

da.	ho.	mi.	
0	10	30	At Olfernes and Harwigde without the banks.
1	11	18	At Leyſtaff in the Roade.
2	12	6	Yarmouth in the Road.
3	12	54	Before the Thames of London
4	1	42	At Margat.
5	2	30	At wight within.
6	3	18	At Beunen Deede and Seynhead.
7	4	6	In the Foſſe of Caen.
8	4	54	At Struyſaert, & al the Coaſts of Normandy & Picardy.
9	5	42	At S. Helena and Calveroort.
10	6	30	
11	7	18	
12	8	6	
13	8	54	
14	9	42	
15	10	30	

Falling of ſtreames upon the ſame ſtroke,

From Bergfleur to Algonga. From C. Dorſi to the Iland Dardan.

North and by West, and South and by East.

da.	ho.	mi.	
0	11	15	Betweene Cripple-ſand and the Kreyl.
1	12	3	VVithin at Olfernes.
2	12	51	At Hampton.
3	1	39	At Portsmouth, and at wolfers horne.
4	2	27	At Calveroort in VVight.
5	3	15	Before the Haven of Caen.
6	4	3	Within the Thames of London.
7	5	51	
8	5	39	
9	6	27	
10	7	15	
11	8	3	
12	8	51	
13	9	39	
14	10	27	
15	11	15	

Falling of Streames upon the ſame Stroke.

From S. Matthews point unto Backovens. From Fontenay to S. Matthewes point.

The 37 Point. How to finde the age of the Moone.

TO doe this without an Almanack, you muſt know the Epact or Key of the yeare, and that you ſhall finde by the Golden number, and the Golden number thus: looke how many years there are paſt from the yeare of our Lord, 1500, and theſe divide by 19 and what remains is the Golden number of that yeare, if there remaine nothing, the golden number is 19.

Example.

I deſire to know the Golden number of the yeare 1665, ſetting the 1500 a ſide, I devide the 165 by 19, I find 8, and the remainder is 13. Then the Golden number of the yeare 1665 is 13.

The Golden number increaſeth every yeare with the beginning of the yeare with one, as in the yeare 1664, it is 12, in the yeare 1665 it is 13, and ſo forth to 19, after that againe 1, 2, 3, &c.

The Epact changeth every yeare on the firſt of March, increaſing with 11 to 30, but being more then 30, you muſt leave that 30 and the remainder is the Epact. You ſhall finde it by the golden number thus: tel the golden number on the 3 joynts of your thumme, beginning with one at the lower joynt, to the golden number of your yeare propoſed, if this kinde of telling doth end at the lower joynt, the Epact and the golden number are all one: but if it end on the ſecond joynt, adde 10, if on the third joynt, adde 20 by the ſame golden number, that number then is the Epact of that yeare.

Example.

I deſire to knowe the Epact for the yeare 1665, the Golden number is 13, telling the three joynts of the thumme, beginning with 1, on the undermoſt joynt, the telling endeth with 13 on the uppermoſt joynt, adding 0, to 13. the Golden number, you ſhall have 13 for the Epact of that yeare.

According to the old ſtile, the Golden number is the ſame with the new ſtile, but the Epact is 10 more, therefore if you adde 10 to the Epact of the new ſtile, you have the Epact for the old ſtile, as for the yeare 1665, 10 by 13, (the Epact of the new ſtile) comes 23, for the Epact of the old ſtile.

But to find the Epact without counting, when the Golden number is knowne, according to the old and new ſtile, view this table following, where they are ſett the one by the other.

Golden Number	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
New Epact.	1	12	23	4	15	26	7	18	29	10	21	2	13	24	5	16	27	8	19
Old Epact.	11	22	3	14	25	6	17	28	9	20	1	12	23	4	15	26	7	18	29

The

The Epact being known, you ſhall adde it to the number of the moneths that are paſt from March to the moneth you are in, the ſame moneth being reckoned with it, if this brings forth 30, then it is new moon the firſt day of the ſame moneth, but as much as it wanteth of 30 ſo many dayes you have to the new moon.

Example.

In the year 1663. I deſire to know when the moon ſhall be new in the moneth of Auguſt, the Epact of that yeare is 21, adding there unto 6 for the number of the moneths ſince March (the moneth of Auguſt being included) it makes 27, there wants 3 to make it 30, the moone then ſhall bee new 3 dayes after (namely the 3 of Auguſt.)

The Epact, the number of the moneth ſince March, and the day of the moneth being added, ſuch a number, (or whatſoever it brings forth, more then 30) ſheweth the age of the moon.

Example.

To know the age of the moon on the 12 of Auguſt 1665. I adde the Epact 13, to 6 the moneths paſt, and 12 for the 12 dayes, they make together 31, whereof ſubſtract 30, remains 1, for the age of the moon. This is to be underſtood after the New-ſtile.

To finde out eaſily without caſting up the time of the new moon, we have here adjoyned an Almanack for 8 years next enſuing, calculated by the meridian of Amſterdam, ſhewing the day and houre of every new and full moon, together with the quarters, the uſe of it is thus: by the moon in every moneth there are two columnes of ciphers, the firſt ſheweth the day of the moneth, the ſecond the houres and minutes of the new and full moon, to reckon from the noone of the ſame day to the noone of the day following, according to theſe uſe and cuſtome of Aſtronomers.

Example

I would know in the yeare 1665. in the moneth of September, on what day and houre the moon will be new, ſeeke therefore in that yeare the moneth September, and I finde the new moon on the 8 day, 22 houres, 31 minut. telling from noone tyde 22 houres, 31 minutes, this runs to the next day enſuing in the morning, being the 9, at 10 a clock, 31 minutes after midnight.

To know what day of the week that will be, you muſt firſt know the Dominicall letter of that year, & with what letter each moneth beginneth, the Sundayes letter you ſhall finde under the Almanack of each year; the leap year hath two, the firſt you ſhall uſe to the 25 of Februarie, the other to the end of the year, every moneth beginneth with ſuch a letter as this table following ſheweth.

Januarie, Februarie, March	begins with	A, D, D	April, May, June	begins with	G, B, E
July, Auguſt, Septemb.	begins with	G, C, F	October, Novem., Decemb	begins with	A, D, F

For as much as September beginneth with F, begin to tell in the Circkel letters here under with F, and then proceed to tell forward to 9, which falls out in G, & ſeing the Dominicall letter of this year is D, you may tell from D to G, D on ſunday, E on munday, &c. and G on the wedneſday, and ſo with all the reſt. In the Leap year you muſt tell both the 24 and 25 on F, becauſe the 25 and 24 day were added on F.

A
G B
F C
E D

Almanack for the year 1664. New-stile.

	Moon.	da.	ho.	mi.
Januar.	first quart.	5	23	56
	full moon	12	15	55
	last quart.	19	15	32
	new moon	27	20	10
Februa.	first quart.	4	11	9
	full moon	11	2	55
	last quart.	18	9	57
	new moon	26	13	32
March	first quart.	4	19	36
	full moon	11	14	32
	last quart.	19	5	36
	new moon	27	3	54
April	first quart.	3	2	21
	full moon	10	2	38
	last quart.	18	1	2
	new moon	25	15	1
May	first quart.	2	8	33
	full moon	9	15	32
	last quart.	17	18	14
	new moon	24	23	51
June	first quart.	31	15	10
	full moon	8	3	51
	last quart.	16	9	29
	new moon	23	17	12
July	first quart.	29	23	7
	full moon	7	20	23
	last quart.	15	21	18
	new moon	22	14	10
Auguſt	first quart.	29	9	24
	full moon.	6	12	1
	last quart.	14	6	30
	new moon	20	21	45
Septēb.	first quart.	27	22	57
	full moon	5	3	31
	last quart.	12	14	11
	new moon	19	6	43
Octob.	first quart.	26	16	7
	full moon	4	8	11
	last quart.	11	21	35
	new moon	18	17	18
Novēb.	first quart.	26	12	16
	full moon	3	7	42
	last quart.	10	4	47
	new moon	17	7	35
Decēb.	first quart.	25	9	36
	full moon	2	20	16
	last quart.	9	12	51
	new moon	17	0	20
	first quart.	25	5	45

The golden Number is 12, the Epact is two, the Romane Indict 2, the Sundayes letter FE, the afterwinter 8 weeks 5 dayes, Quadrag. the second of March, Easterday the 13 of April, Ascension the 22 of May, Whitsunday the 1 of June, Advent the 30 of Novemb. This year there will be 4 Ecclipses, two in the Sun & two in the Moon, the 1 in the Sun the 28 of Januarie, the second in the Moon on the 11 of Februar. The third in the Sun on the 23 of July. The 4. in the Moon on the 6 of Auguſt; the first at the Sun and the last at the Moon, shall be seen of us.

Almanack for the year 1665. New-stile.

	Moon.	da.	ho.	mi.
Ianuary	full moon	1	6	24
	last quart.	7	23	52
	new moon	15	19	28
	first quart.	23	22	56
Februa.	full moon	30	18	38
	last quart.	6	12	40
	new moon	14	13	14
	first quart.	22	12	16
March	full moon	1	4	41
	last quart.	8	3	54
	new moon	16	8	52
	first quart.	23	12	24
April	full moon	30	14	14
	last quart.	6	12	13
	new moon	15	0	7
	first quart.	22	5	39
May	full moon	28	25	53
	last quart.	6	23	33
	new moon	14	12	25
	first quart.	21	11	15
Iune	full moon	28	10	36
	last quart.	5	9	28
	new moon	12	22	33
	first quart.	19	16	18
Iule	full moon	26	22	45
	last quart.	4	23	45
	new moon	12	7	12
	first quart.	18	22	6
Auguſt.	full moon	26	12	45
	last quart.	3	16	17
	new moon	10	14	53
	first quart.	17	6	34
Septēb.	full moon	25	4	29
	last quart.	2	4	43
	new moon	8	22	31
	first quart.	15	17	42
Octob.	full moon	23	21	0
	last quart.	1	15	32
	new moon	8	7	9
	first quart.	15	9	17
Novēb.	full moon	23	13	17
	last quart.	31	0	38
	new moon	6	17	18
	first quart.	14	4	36
Decēb.	full moon	22	5	46
	last quart.	29	9	18
	new moon	6	6	0
	first quart.	14	22	14
	full moon	21	20	48
	last quart.	28	17	20

The Golden Number is 13 the Epact is 13, the Romane, Indict 3, the Sundayes letter is D, the afterwinter is 7 weeks 3 dayes, Quadrag. 22, of Februar. Easterday the 5 April, Ascension the 14 of May, Whitsunday the 24 of May, Advent the 29 of November. There will be 4 Ecclipses this year, two in the Sun & two in the Moon: the first in the Sun the 16 of Ianuar. The second in the Moon the 31 of Ianuar. The third in the Sun the 12 of Iuly, the 4 in the Moon the 26 of Iuly, both in the Moon shall be seen of us, but in the Sun beyond our Horizon.

Almanack for the year 1666. New-stile.

	Moon.	da.	ho.	mi.
Ianuar.	new moon	4	21	31
	first quart.	12	23	10
	full moon	20	9	53
	last quart.	27	1	11
Februa.	new moon	3	14	48
	first quart.	11	18	31
	full moon	18	20	45
	last quart.	25	11	41
March	new moon	5	8	51
	first quart.	13	11	8
	full moon	20	6	11
	last quart.	27	0	16
April	new moon	4	2	21
	first quart.	12	0	2
	full moon	18	14	33
	last quart.	25	13	37
May	new moon	3	18	22
	first quart.	11	7	2
	full moon	17	22	47
	last quart.	25	6	31
Iune	new moon	2	4	2
	first quart.	9	14	29
	full moon	16	7	39
	last quart.	23	23	18
Iuly	new moon	1	20	0
	first quart.	8	18	16
	full moon	15	17	51
	last quart.	23	16	0
Auguſt	new moon	31	4	19
	first quart.	6	22	18
	full moon	14	6	17
	last quart.	22	9	0
Septēb.	new moon	29	15	0
	first quart.	5	4	53
	full moon	12	18	57
	last quart.	21	0	52
Octob.	new moon	27	23	44
	first quart.	4	15	6
	full moon	12	14	4
	last quart.	20	15	27
Novēb.	new moon	27	8	43
	first quart.	3	5	16
	full moon	11	4	0
	last quart.	19	4	7
Decēb.	new moon	25	18	46
	first quart.	2	22	54
	full moon	11	2	41
	last quart.	18	14	21
	new moon	25	9	18

The golden Number is 14, the Epact is 24, the Sundayes letter is C, the Romane Indict 4, Septuagesima the 7 of March, Easterday the 25 of April, Ascension the 3 Iune, Whitsunday the 13 of Iuny, Advent the 28 of November. Three Ecclipses shall be this year, two in the Sun and one in the Moon. The first in the Sun shall be seen of us the 5 of Ianuarie, a fore midday: the second in the Moon the 16 of Iune, both without our sight; the third in the Sun the 2 of Iuly, in the morning at seven houres, great Ecclips for to see by us.

Almanack for the year 1667. New-stile.

	Moon.	da.	ho.	mi.
Ianuar.	first quart.	1	17	20
	full moon	9	17	38
	last quart.	16	22	30
	new moon	23	19	45
Februa	first quart.	31	16	18
	full moon	8	10	18
	last quart.	15	5	28
	new moon	22	10	48
March	first quart.	2	22	19
	full moon	9	22	3
	last quart.	16	13	15
	new moon	24	3	0
April	first quart.	1	6	9
	full moon	8	7	28
	last quart.	14	22	9
	new moon	22	17	38
May	first quart.	30	21	8
	full moon	7	15	31
	last quart.	14	9	30
	new moon	22	11	6
June	first quart.	30	8	9
	full moon	5	22	33
	last quart.	12	22	32
	new moon	21	1	47
July	first quart.	28	14	12
	full moon	5	6	5
	last quart.	12	13	47
	new moon	20	15	11
Auguſt	first quart.	27	21	26
	full moon	3	14	54
	last quart.	11	6	37
	new moon	19	2	25
Sept.	first quart.	26	1	35
	full moon	2	1	44
	last quart.	10	0	39
	new moon	17	14	15
Octob.	first quart.	24	0	38
	full moon	1	15	32
	last quart.	9	15	55
	new moon	17	0	56
Nov.	first quart.	23	15	1
	full moon	31	16	50
	last quart.	8	12	8
	new moon	15	10	56
Dec.	first quart.	22	2	52
	full moon	30	2	53
	last quart.	8	4	6
	new moon	14	21	8
	first quart.	21	18	36
	full moon	29	22	21

The golden Number is 15, the Epact is 5, the Romane Indict 5, the Sundayes letter B. Easterday the 10 of April, Ascension the 19 of May, Whitsunday the 29 of May, Advent the 27 of Nov. This year there will be 5 Ecclip. 2 in the Moon, & 3 in the Sun, the first in the Moon the 6 of Iune, afoor midday at 10 houres; the 2 in the Sun the 21 of Iuny, aftermidday at 2 a clock; the third in the Sun the 15 of Novemb. in the evening at 11 houres; the 4 in the Moon the 30 of Nov. after midday at 3 a clock: the fifth in the Sun the 15 of Dec. afoor midd. at 9 hour. & shal not be seen of us.

Almanack for the year 1668. New-ſtile.

	Moon.	da.	ho.	mi.
	laſt quart.	6	17	10
	new moon	13	7	47
Januar.	firſt quart.	20	12	52
	full moon	28	16	44
	laſt quart.	5	1	23
	new moon	11	19	25
Februa.	firſt quart.	19	8	43
	full moon	27	8	43
	laſt quart.	5	10	31
	new moon	12	16	25
March	firſt quart.	20	4	28
	full moon	27	21	42
	laſt quart.	3	15	29
	new moon	10	21	48
April	firſt quart.	18	23	10
	full moon	26	7	52
	laſt quart.	2	12	25
	new moon	10	12	13
May	firſt quart.	18	15	9
	full moon	25	15	56
	laſt quart.	1	6	19
	new moon	9	2	50
June	firſt quart.	17	14	30
	full moon	23	22	55
	laſt quart.	30	16	11
	new moon	8	18	1
July	firſt quart.	16	15	35
	full moon	23	10	43
	laſt quart.	30	5	50
	new moon	7	8	50
Auguſt	firſt quart.	14	23	39
	full moon.	21	13	41
	laſt quart.	28	21	47
	new moon	5	23	10
Septēb.	firſt quart.	13	5	10
	full moon	19	23	22
	laſt quart.	27	15	37
	new moon	5	12	47
Octob.	firſt quart.	12	11	8
	full moon	19	11	54
	laſt quart.	27	11	20
	new moon	4	2	22
Novēb.	firſt quart.	10	17	48
	full moon	18	3	24
	laſt quart.	26	7	9
	new moon	3	13	2
Decēb.	firſt quart.	10	3	23
	full moon	17	21	40
	laſt quart.	26	1	42

The golden Number is 16, the Epact is 16, the Romane Indict 6, the Sundayes letter is A G, Septuageſima the 12 of Feb. Eaſterday the 1 April, Aſcenſion the 10 of May, Whitſunday the 20 of May, Advent the 2 of Decemb. There will be 4 Eccliſpes this year, two in the Moon and two in the Sun: the firſt in the Sun the 10 of May, about midnight; the ſecond in the moon the 26 of May, in the morning at 4 a clock, the beginning ſhall be ſeen of us; the third in the Sun the 4 of Novemb. aftermidday at 3 a clock, & ſhall be ſeen of us; the 4 in the Moon the 18 Nov. at half four aftermidday, the end ſhall be ſeen of us.

Almanack for the year 1669. New-ſtile.

	Moon.	da.	ho.	mi.
	new moon	1	23	48
	firſt quart.	8	16	19
Ianuary	full moon	16	17	7
	laſt quart.	24	17	35
	new moon	31	10	0
	firſt quart.	7	8	4
Februa.	full moon	15	12	7
	laſt quart.	23	9	55
	new moon	1	20	10
	firſt quart.	9	1	40
March	full moon	17	5	9
	laſt quart.	24	14	39
	new moon	31	6	46
	firſt quart.	7	19	51
April	full moon	15	18	57
	laſt quart.	22	20	6
	new moon	29	18	0
	firſt quart.	7	14	6
May	full moon	15	6	36
	laſt quart.	22	0	39
	new moon	29	6	4
	firſt quart.	6	7	4
Iune	full moon	13	11	38
	laſt quart.	20	6	18
	new moon	27	15	17
	firſt quart.	5	22	25
Iule	full moon	12	23	12
	laſt quart.	19	13	22
	new moon	27	10	2
	firſt quart.	4	12	0
Auguſt.	full moon	11	6	15
	laſt quart.	18	0	28
	new moon	26	1	39
	firſt quart.	2	23	12
Septēb.	full moon	9	13	31
	laſt quart.	16	14	20
	new moon	24	17	42
	firſt quart.	2	8	16
Octob.	full moon	8	23	1
	laſt quart.	16	7	55
	new moon	24	9	43
	firſt quart.	31	15	49
Novēb.	full moon	7	10	28
	laſt quart.	15	3	57
	new moon	23	0	43
	firſt quart.	29	22	44
Decēb.	full moon	7	0	39
	laſt quart.	15	0	46
	new moon	22	14	15
	firſt quart.	29	6	39

The Golden Number is 17, the Epact is 27, the Sundayes letter is F, the Romane, Indict 7, Quinquag. the 3 of March, Eaſterday the 21 of April, Aſcenſion the 30 of May, Whitſunday the 9 of June, Advent the 1 of December. Two Eccliſpes will be this year in the Sun, and noon in the Moon: the firſt in the Sun on the laſt of April, in the morning at ſix a clock: the ſecond in the Sun on the 24 of October, in the evening at 10 a clock, & ſhall both be ſeen without our ſight.

Almanack for the year 1670. New-ſtile.

	Moon.	da.	ho.	mi.
	full moon	5	17	26
	laſt quart.	13	12	2
Ianuar.	new moon	21	2	3
	firſt quart.	27	12	44
	full moon	4	11	44
	laſt quart.	12	13	0
Februa.	new moon	19	12	18
	firſt quart.	26	5	18
	full moon	6	6	17
	laſt quart.	14	5	49
March	new moon	20	21	34
	firſt quart.	27	19	51
	full moon	4	23	39
	laſt quart.	12	16	39
April	new moon	19	6	21
	firſt quart.	26	11	57
	full moon	4	14	57
	laſt quart.	11	23	39
May	new moon	18	15	30
	firſt quart.	26	4	44
	full moon	3	3	27
	laſt quart.	10	3	33
Iune	new moon	17	1	26
	firſt quart.	24	21	43
	full moon	2	13	56
	laſt quart.	9	7	37
Iuly	new moon	16	14	4
	firſt quart.	24	14	3
	full moon	31	22	52
	laſt quart.	7	12	54
Auguſt	new moon	15	2	42
	firſt quart.	23	6	0
	full moon	30	7	0
	laſt quart.	5	21	20
Septēb.	new moon	13	18	17
	firſt quart.	21	20	42
	full moon	28	15	10
	laſt quart.	5	9	40
Octob.	new moon	13	11	35
	firſt quart.	21	9	20
	full moon	28	0	16
	laſt quart.	4	1	39
Novēb.	new moon	12	5	28
	firſt quart.	19	19	48
	full moon	26	10	53
	laſt quart.	3	20	45
Dec.	new moon	11	22	47
	firſt quart.	19	4	49
	full moon	25	23	34

The golden Number is 18, the Epact is 8, the Sundayes letter is E, the Romane Indict, Quinq. the 16 of Febr. Eaſterday the 6 of April, Aſcenſion the 15 of May, whitſunday the 25 of May, Advent the 30 of Novemb. This year there will bee four Eccliſpes, 2 in the Moon, and 2 in the Sun, the firſt in the Moon the 5 of April at midday: the ſecond in the Sun the 19 of April at 7 a clock in the evening, the third in the Moon the 29 of Sept. at 3 a clock in morning, and ſhall be ſeen of us, the fourth in the Sun the 13 of October at 11 a clock in the night.

Almanack for the year 1671. New-ſtile.

	Moon.	da.	ho.	mi.
	laſt quart.	2	17	44
	new moon	10	14	17
Ianuar.	firſt quart.	17	11	44
	full moon	24	13	8
	laſt quart.	1	14	48
	new moon	9	3	25
Februa	firſt quart.	15	19	26
	full moon	23	6	51
	laſt quart.	3	10	30
	new moon	10	14	4
March	firſt quart.	17	4	41
	full moon	24	23	55
	laſt quart.	2	2	44
	new moon	8	23	0
April	firſt quart.	15	15	50
	full moon	23	15	40
	laſt quart.	9	15	34
	new moon	8	15	23
May	firſt quart.	15	5	0
	full moon	23	8	13
	laſt quart.	31	7	0
	new moon	6	14	23
June	firſt quart.	13	19	51
	full moon	21	22	35
	laſt quart.	29	6	42
	new moon	5	22	39
July	firſt quart.	13	11	53
	full moon	21	10	26
	laſt quart.	28	10	49
	new moon	4	8	40
Auguſt	firſt quart.	12	5	14
	full moon	19	21	24
	laſt quart.	26	15	15
	new moon	2	20	53
Sept.	firſt quart.	10	12	43
	full moon	18	7	13
	laſt quart.	24	21	26
	new moon	2	12	0
Octob.	firſt quart.	10	16	0
	full moon	17	16	35
	laſt quart.	24	7	34
	new moon	1	5	27
Nov.	firſt quart.	9	8	0
	full moon	16	2	25
	laſt quart.	22	21	40
	new moon	1	0	26
Dec.	firſt quart.	8	21	49
	full moon	15	12	49
	laſt quart.	22	15	7
	new moon	30	19	18

The golden Number is 19, the Epact is 19, the Sundayes letter is D, the Romane Indict Quinq. the 8 of Feb. Eaſterday the 29 of March, Aſcenſion the 7 May, Whitſunday the 17 of May, Advent the 29 of Nov. This year there ſhall be 6 Eccliſpes, the firſt in the Sun the 11 of March, the ſecond in the Moon upon the 29 of March, the third in the Sun the 8 of April, the fourth in the Sun on the 3 of Sept. the 5 in the moon the 18 of Sept the 6 in the Sun the 2 of Octob. all beyond our Horizon, except the laſt in the Moon.

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I. d. la Flores

Corvo

Tercera

S. Michiel

S. Maria

I. d. Brave

I. d. S. Antonio

I. d. S. Nicolas

I. d. S. Tiago

I. d. Mayo

I. de Sal

I. Madera

Porto Santo

Canaria

Fortaventura

Alegranca

Palma

Ferro

Malta

Sicilia

Corsica

Majorca

Minorca

Yvica

50 55 60 65 70 75

PASSAS.

GROENLAND.

C. Farewel
C. Discord
Weidenshoord
Bredeshoord
Hermelle visch
Fogelsheren
Rekol
Yrland.
Schotland.
Engeland.
Londen
Lovys
Ferø
Ian Mayen Eylandt
Hitlandt
Di Kimmen
Yslandt
Spitsbergen
Beeren Eyland
Noordkyn
Warhoss
LAPLAND
Nova Zemla
DVYTSCH LANDT.
SWEDEN
Noorwegen
RVSSIA
C. Candenos
I. Colgoyen
Nieu Walcheren
Duytsche mylen 15 in een graet
Spaensche mylen 17½ in een graet
Fra. en Engs. mylen 20 in een graet

NOORTSCHE ZEE

Pascaarte van de
NOORTZEE
Vertonende van Calix tot Dronten, als oock tusschen Doeveren en Hitlandt.

T'AMSTERDAM.

Bij Pieter Goos Plaetsnijder op 't water in De Vergulde Zee-Spiegel. Anno 1666.

Edenburg
Nicasteel
Londen
Antwerpen
Amsterdam
Emden
Bremen
Hamborg
Lubeck
Wismar
Rostock
Straelsund
Stetin
Groningen
Rugen
Bornholm
Flamborgen hooft
Boston
Yarmouth
Lestoft
Stockholm
Christianopolis
HOLLANDIA
ZEELANDIA
FRISIA
GELDERLANDT
OVERYSSEL
IVTLANT
SCHOONEN
HALLAND
SWEDEN
MECKLENBORCH
POMEREN
De Hoofden
De Wielingen
De Vlackte
De Bree Hoorntjes
Texel
Vlieland
Schelling
Ameland
Schiermonnick oogge
Borckum
Juist
Norderney
Baltrum
Langeroog
Spiekeroog
Wangerooge
Heiligelant
Vlie
Ems
Jade
Weser
Elve
Eyder
Noortstrant
Americk
Rom
Maan
Gatte Stap
Texel
Vlieland
Terschelling
Ameland
Schiermonnick oogge
Buschil
Rottum
Borckum
Juist
Norderney
Baltrum
Langeroog
Spiekeroog
Wrangeroog
Heiligelant
Lestoft
Yarmouth
Flamborgh
Scarborough
Whitby
Robyn Hoods bay
Redcliff
Teesmouth
Sunderland
Hartlepool
Stockton
Lynn
Boston
Wrangel
Lagarnes
Flarts
Capelle
Wielles
Blackeney
Crommer
Kessteren
Stuttzhum
Tilbury
Colchester
Basel
Orfordhess
Harwich
Yarmouth
Lestoft
Gravesent
Rye
Brighthelmston
Arundel
Chelsy
Ilfextor
Londen
Thames
Medway
Sheppey
Margate
Goodwin
Downs
Dover
Calais
Gravelingen
Duynkerke
Nieuwpoort
Oostende
Sluys
Philippine
Middelburg
Goree
Maese
Rotterdam
Delft
Leyden
Haerlem
Amsterdam
Texel
Vlieland
Terschelling
Enchuysen
Monnickendam
Hoorn
Medemblick
Stavoren
Workum
Harderwyck
Campen
Ems
Dock
Lauwers
Jade
Weser
Elve
Eyder
Noortstrant
Americk
Rom
Maan
Gatte Stap
Kalloo
Ysselmuyden
Kampen
Zwol
Deventer
Arnhem
Nimmegen
Tiel
Bommel
Gorcum
Dordrecht
Rotterdam
Delft
Leyden
Haerlem
Amsterdam
Enchuysen
Monnickendam
Hoorn
Medemblick
Stavoren
Workum
Harderwyck
Campen
Ems
Dock
Lauwers
Jade
Weser
Elve
Eyder
Noortstrant
Americk
Rom
Maan
Gatte Stap
Kalloo
Ysselmuyden
Kampen
Zwol
Deventer
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Nimmegen
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Baltrum
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Spiekeroog
Wrangeroog
Heiligelant
Lestoft
Yarmouth
Flamborgh
Scarborough
Whitby
Robyn Hoods bay
Redcliff
Teesmouth
Sunderland
Hartlepool
Stockton
Lynn
Boston
Wrangel
Lagarnes
Flarts
Capelle
Wielles
Blackeney
Crommer
Kessteren
Stuttzhum
Tilbury
Colchester
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Chelsy
Ilfextor
Londen
Thames
Medway
Sheppey
Margate
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Dover
Calais
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Duynkerke
Nieuwpoort
Oostende
Sluys
Philippine
Middelburg
Goree
Maese
Rotterdam
Delft
Leyden
Haerlem
Amsterdam
Texel
Vlieland
Terschelling

Orcades
Fula
Fetla
Blanchebergs
Lella
Olst
Balens Eylandē
Hitlant
Ratterbrug
Dunbar
Caenegate
Boetzeclip
Wasser
Arensburg
Lansord
Wanesberg
Cimbris Sr.
Ferol
De Kimmen
NOORWEGEN.
SWEDEN.
Bergen
Wolfiers Klp
Schouwens
Brouwers Sont
Solmersondt
Pyesondt
Craysfiord
Tilesfiord
I. Mark
Waterklyven
Oldenes
Orfiord
Oldesondt
Ryersondt
Waldres
Ster-sfoort
Oosterre
Rocher
Samboeck
Book grd
Karsfiord
Skalsfiord
Vleesschen Rut
t Lizet
d Ieddet
Longenes
Stavanger
Out Sillee
Vleeker
Wolfsont
Olde Inlsondt
Maerdou
Oosterryse
Oostsoort
Lange sont
Laerwyc
Coperwyck
I. Farder
Ansloo
Akersond
Schagerhil
Jitrum
Dillesloep
Noordergronsdam
Langeberg
Katers
Middelgrant
Vlie
Texel
Eylandt van Vlieland
Vooruyt
Eylandt van Schelling
Eylandt van Ameland
Eylandt van Schiermonnick
Eylandt van Borkum
Eylandt van Rottum
Eylandt van Delfsyl
Eylandt van Bant
Eylandt van Buss
Eylandt van Wangeroge
Eylandt van Spiker
Eylandt van Norderney
Eylandt van Baltrum
Eylandt van Langeoge
Eylandt van Spiekeroge
Eylandt van Wangeroge
Eylandt van Harlingen

Sommige namen in 't Vlie met
letters aengetekent.
a de Ietting
b Voor de sloot
c 't Rosbegat
d Noordt Ietting
e Texs Deck

Duytsche mylen 15 in een graad
Spaensche mylen 17½ in een graad
Engelsche en Fransche mylen 20 in een graad

VRIESLAN

Holwert
Franiker
Wynsem
Arum
Bolswaert
Harlingen
Pingum
Pandragen
Koorwert
Hackum
Voorwolde
Buurt
Worcum
Hinlopen
West Worcum
Midlandt
Vierboet
Brandaris
Cant
Schelling
Vlie-
landt
Westcynde
Eyerlandt
Texel
Koog
De Burgh
De Westen
Westeynd
't Wambas
Noorn
Oosterend
't Schild
Den Hoorn
De Helder
Kreyduyn
Groenduyn
Eyckduyn
Blenck
Ariaenbergers hille
't Oogh
Bree
Sandt
Munnicke sant
Drysdal
Zuyder ton
Noorder ton
Middel ton
Wieringen
Oostlander Sherck
Sera
Clenrisse
Ypreshoof
Spangiaerts gat
Keysers plaat
Oosterboomgat
Wester boomgat
Amelant
Ballum
't Slot
Hollum
Nes
De Horsten
Crooms hoek
Langebaunt
Camperzand droog
Den Ihle
't Wad
Arnlander gat
Cant
Der Noorn
Grind
Kroon Zand
De Kaap Wester
Langezant
Drayland
Vierboet
Oosterend
Oosterboomgat
Stormzand
Westerboomgat
Vierboet
Oosterend
Schilgronde
Langezant
Inschotsche Gat
Texelsche Gat
Oude Vlie
Texelsche Stroomgat
Schuyt gat
Vlieter
Vlieter
Ryper
't Nieuwe diep
Lange diep
Middelgat
Eyerlandsche Gat
Zeegat
Inschotsche Gat
Texelsche Gat
Oude Vlie
Texelsche Stroomgat
Schuyt gat
Vlieter
Ryper
't Nieuwe diep
Lange diep
Middelgat
Eyerlandsche Gat
Zeegat

Pascaarte vande ZUYDER-ZEE,

xel, ende Vlie-stroom, als mede 't Amelander-gat.

t'Amsterdam,

By Pieter Goos op 't Water inde Vergulde Zee Spiegel Anno 1666.

Swartesluys
Genemuiden
Blockzyl
Vollenhove
Oldemarckt
Blanckenham
Kuinder
Vleckhuysen
Lemmer
Campen
Elburgh
Enckhuysen
Vrck
't Vel van Vrck
Marcken
't Hoornicker hop
Hoorn
Edam
Monnikedam
Schreldoexhaven
Dorpgerdam
Wracken
Burcksloot
Diemen
Amsterdam
Naerden
Muyerberg
Muyden
Weesp
Outdem
Schardam
Enckhuysen
Medenblick
Twisck
Noorder gat
Zuyder gat
Vlieter
Texel
Marsdiep
Vlie
Vlieter
Ameland
Schiermonnikoog
Rottumerplaat
Rottumerdiep
Lauwerszee
Zeerijp
Uithuizen
Warffum
Usquert
Middelstum
Winsum
Leens
Ulrum
Zoutkamp
Aduard
Groningen
Haren
Noordlaren
Zuidlaren
Roden
Norg
Peize
Vries
Assen
Hoogeveen
Meppel
Staphorst
Zwartsluis
Hasselt
Genemuiden
Kampen
Elburg
Harderwijk
Nunspeet
Hattem
Zwolle
Deventer
Olst
Wijhe
Windesheim
Zalk
Kampereiland
Kampervijver
Kampervijverdijk
Ketelmeer
Ramsdiep
Urkerboom
Urk
Emmeloord
Ens
Lemmer
Stavoren
Hindeloopen
Workum
Makkum
Bolsward
Sneek
Joure
Heerenveen
Oudeschoot
Akkrum
Gaastmeer
Balk
Sloten
Joure
Lemmer
Oudemirdum
Terschelling
Vlieland
Texel
Den Helder
Den Oever
Medemblick
Enkhuizen
Hoorn
Schardam
Edam
Volendam
Monnikedam
Marken
Amsterdam
Muiden
Naarden
Weesp
Diemen
Wormer
Zaandam
Purmerend
Monnikendam
Broeck in Waterland
Ransdorp
Durgerdam
Schellingwoude
Amsterdam
Haarlem
Leiden
Alkmaar
Enkhuizen
Hoorn
Medemblick
Twisck
Schagen
Petten
Callantsoog
Julianadorp
Den Helder
Den Oever
Wieringen
Wieringerwaard
Wieringermeer
Anna Paulowna
Kolhorn
Oudeschild
Texel
Vlieland
Terschelling
Brandaris
Noordzee
Waddenzee
Zuiderzee
IJsselmeer
Markermeer
IJmeer
Gooimeer
Eemmeer
Nijkerkernauw
Veluwemeer
Drontermeer
Vollenhovermeer
Ketelmeer
Zwartemeer
Kampervijver
Kampereiland
Kampervijverdijk
Ramsdiep
Urkerboom
Urk
Emmeloord
Ens
Lemmer
Stavoren
Hindeloopen
Workum
Makkum
Bolsward
Sneek
Joure
Heerenveen
Oudeschoot
Akkrum
Gaastmeer
Balk
Sloten
Oudemirdum
Terschelling
Vlieland
Texel
Den Helder
Den Oever
Medemblick
Enkhuizen
Hoorn
Schardam
Edam
Volendam
Monnikedam
Marken
Amsterdam
Muiden
Naarden
Weesp
Diemen
Wormer
Zaandam
Purmerend
Monnikendam
Broeck in Waterland
Ransdorp
Durgerdam
Schellingwoude
Amsterdam
Haarlem
Leiden
Alkmaar
Enkhuizen
Hoorn
Medemblick
Twisck
Schagen
Petten
Callantsoog
Julianadorp
Den Helder
Den Oever
Wieringen
Wieringerwaard
Wieringermeer
Anna Paulowna
Kolhorn
Oudeschild
Texel
Vlieland
Terschelling
Brandaris
Noordzee
Waddenzee
Zuiderzee
IJsselmeer
Markermeer
IJmeer
Gooimeer
Eemmeer
Nijkerkernauw
Veluwemeer
Drontermeer
Vollenhovermeer
Ketelmeer
Zwartemeer



The first part of the New LIGHTNING, SEA COLUMNE, OR SEA MIRROUR.

THE FIRST BOOKE,
Of The
EASTERNE NAVIGATION,
Containing

The descriptiõ of the north Sea, the Coast of Holland, Friesland, Holstein, Iutland, Meklenburgh, and Denemarck to Valsterboen, in the Island of Rugen, and with all the coast of Norway to Dronten, as also the east side of England and Scotland.

The first Demonstration,

Where in

Are described the south Sea, the Vliestreame, the Vlie, and the channell of Ameland.

WHen you saile from Amsterdam to the Fall of Urck, you must keep the middle of the channell, in sayling to Tyoort, and from thence over Pampus, with a shipp of great draught, that draweth tenne foot or more; keepe Marken church without to the land of Udam, called Schyteldoeckshaven, so long untill that the steeple of Zuyderwouw come past Kinnigherbeurt, which are the houses half way betwixt Schyteldoecks-haven & Durgerdam, goe then towards the land east untill that the New church of Amsterdam come about Durgerdam, keepe that so standing, untill that the church of Weesp be come past the House or Castle at Muyen, so that it do stand somewhat nearer to Muyen then to the House, keepe Weesp standing so, until that Edam come without the east end of Marken. In this farewaye it is a foote deeper, then if you sailed right through.

For to avoyde Muyen sand: men were wont to bring the houses which were wont to stand upon Tyoort to the southwars of the Heyligher-stee at Amsterdam, thereby you may make some reckoning, they are good long markes: when Monnickedam is about the west end of Schyteldoecks-haven, and the house at Muyen betwixt Weesp and the chorch at Muyen, then are you thwart of Muyen sand. For to saile right through over Pampus, then keepe the steeple of Diemen over or about the point of Tyoort, so long as you can see Tyoort, that is a right longst marke for to sayle over Pampus.

When you are come thwart of the east end of Marken, goe then on northeast, or somewhat more eastwardly towards the Fall of Urck, which is 7 leagues: when you are come with in a great league of Urck, you shal meete with a hard sand, celled the Houtribbe, lying southeast & northwest thwart over the Farewaye, there is no more water upon it, then upon the Flat of Wieringen, or of Freesland, you shall finde also no deeper water there then right through. When Enckhuysen lyeth northwest & northwest & by west from you, then you are upon the Houtribbe. Before that you come against the sand, you can by night see the fire upon Urck. When as Urck or the fire is more northerly then northeast from you, & that you get shoaling, then that is certainly of the Houtribbe: for so you cannot come too neare the Enckhuysen sand. When you come from the southwards, you are not about the Enckhuysen sand before that the church upon Urck come without the little village of houses, which is then east and by south, and east southeast from you: if that then you goe away northwest and by west or westnorthwest you shall runne close a longst by the side of the land. With a ship of great draught, bring the church a good way through the houses, untill that it stand eastsoutheast from you, then goe bouldly on northwest and by west or keepe Medenblick without the point of the Ven, and so you shal not come too near neither to sand nor shoale. Likewise if you come from the northwards, and bring Urck not more eastwardly then east southeast from you, then you cannot take hurt also of the Enckhuysen sand. From Urck to the buyes upon the Cripple and Hof-stede, the course is northwest and by west, with that course you may runne all alongst unto the souther buye upon Wieringhen Flat: in turning to windwards, you may wel bring Medenblick a little within the point of the Ven, but when as Medenblick is without it, then you are in the right fareway.

The Houtribbe.

Marks of Enkhuysen sand.

Betwixt Urck and the buye upon the Hofstede northeast somewhat eastwardly from thee steeple of Enckhuysen lyeth a little plate of hard sand, lying towards the end of Enckhuysen sand, which is not deeper then the Frees

Flat, about to the eastwards of it, is the deepest water, but about to the westwards of it (by some called the Kattegat) you shall be soonner about the High Horne, or the Enckhuysen sand, & it is good for ships that draw but little water.

Marks of the buyes upon the Hofstede and Cripple.

The thwart markes of the buyes, both upon the Cripple and Hofstede; are Grootebroeck and Hem (two sharp steeples) right one in the other, and Warnis, a little sharp steeple in Freesland to he south side of the Cliffe of Staverne, then you have the length of these buyes, which lye each of them in three fathom, the one on the east shoare, and the other on the west shoare upon the tayle of the Cripple. There is in the right fare waie, two foot lesse then five fathom, and soft ground. When the steeple of Medenblick commeth to the northwards of the house of Medenblick, so farr as the house is broade, then you are cleare of Cripple sand, and past it; goe then on northwest, and northwest and by north to the buye upon the Creyl, according as the winde and tyde shall be, the right farewaie there, is deepe 5 fathom scarce. Thwart of the Creyl, in sailing out or about the Creyl, in sailing in, that is a little within the Creyl on the north shoar, lyeth alongst the reach (towards the buye upon the Hofstede,) a hard sand or plate, called the south Creyl, upon which there is no more then twelve foot water, at low water, betwixt that banck and the north shoare, it is three fathom deepe, and soft ground, and to the southwards, or the westwards of it, foure fathom and an halfe. When Mirnes, a little flat steeple in Freesland, commeth over a long countrie-house to the southwards of the cliffe of Staverne, then you come right thwart of that foresayd plate.

The Creyl. South Creyl.

Marck of the Creyl.

The markes of the buye upon the Creyl, are the sharpe steeple of Twisch over the Cornemill to the westwards of Medenblick, and that little flat steeple of Mirnes to the south side or east side of the cliffe. The right fareway there is four fathom and an half, & five fathom deep, soft ground, the buye lyeth in four fathom, if need require, men may runne wel a cables length about to the eastwardes of it.

Freese plate.

From the buye upon the Creyl, to the buy upon the Freese plate, the course is north and by east: When the steeple of Twisck commeth a little to the northwards of Medenblick, then keepe them soo standing, so long as you can see it; & then you shall not saile within any shoales betwixt that plate and the Creyl.

Monick-sand.

Betwixt the buye upon the Creyl, and the Freese plate, on the west shoare, alongst the Reach, lyeth a hard sand, called Monick-sand, which men may be foul of, if they runne somewhat too farre over to the westwards.

When you are come about the Creyl, you may goe on north and by east (with a shippe that draweth but little water) over the tayle of Broad-sand, right to the buye upon the sand, called Westworckum, but with shippes of great draughts, you must keep the right farewaye. For to finde the deepest water upon the flat: bring Pendragen, a little flatte steeple (standing to the westwards of Worckum) to the westwards of a little village, which standeth alsoo to the westwards of Worckum, and saile so right with it, that is a good longst marcke of the buy upon the Freese plate, and soo you shall runne right with the buy, when as that Warnes and Mirnes come one in the other, to the northwards of Staveren, then you have the length of the buy, which lyeth on the west side of the Plate, you must runne alongst to the westwards of it, there is the deepest water: when you come from the northwards, you might sayle within the Freese-plate on the east shoare.

Being past the foresayd buye upon the plate, goe on northnortheast, untill that Pendragen come betwixt the little village and Voorwolde. If that you have then the cliffe through Staveren, then you have the deepest water upon the shoalest of the flatt, then men runne commonly a little more northerly unto the buye in the Bight, and alongst to the westwards of it, which lyeth right in the farewaye, in sixteen foot, but alongst to the eastwards of the buye is the deepest water, the farther into the Bight towards Freesland the deeper. The marke of this buy, is the little flatt steeple of Mirnes on to the southwards of Molqueren. Bring that foresayd little flat steeple in Molqueren, & keepe it so standingh, & then you come in the farewaye of the buy of West-worckum, that is a very good marcke, when the buyes are taken away.

The old thwart markes of the buy in the Bight, are Mirnes, Molqueren, Hemelum, and a little long village, when they stand in four parts. Betwixt the buyes upon the Freese plate, and in the Bight, is the shoalest of the flatt. When the buy in the Bight is on your broad side, then go on north and by west, somewhat more westerly, unto the buy of West-worckum, which lyeth on the east shoare in 16 foot at low water, upon these marks: a little sharpe steeple, far within the land, called Harich, commeth over a little village, to the northwards of Hinlopen, called Dertwisch, the right deepe thwart of it is three fathom. The old markes are two villages next to Mackum, upon the water side, standing northeast off from it, when these stand a little asunder, one from the other, you see yet two little steeples somewhat to the northwards of Bolswart, allmost on to the other, neare about as the other upon the water side stand asunder, the one is called Idsegahuysen. The thwart markes are a high house on the east end of Coudom, that commeth within a capstane barres length to the south end of Hinlopen. From thence to the buy upon Yghelhoeck, the course is north, the markes there of are, a little sharpe steeple with the first long village to the northwards of Worckum, called Geest, when that little steeple commeth in the innermost swampe of that long village, then you have the buye, that is a good thwart marck: the longst marks are, the sharpe steeple of Pingom over the flat steeple of Coorenwaert upon the waterside, and Pendragen to a little house to the northwardes of the village with the swamp, or when the mill of Staveren standeth betwixt the towne and the Blockhouse of Stavern, these are alle good longst markes of the buy upon Yghelhoeck.

From Yghelhoeck to the Middle-ground the course is north, the right deepe in the Middle-ground is seven fathom in the farewaye betwixt West-worckum and Yghelhoeck the right deep in four fathom, soft ground, the east shoare is flat and the west shoare steep. The buy of the Middle-ground lyeth upon these marks: the two sharpe steeples Arund and Pingom one in the other about northeast from you: or Bolswaert right to the northwards of a Countrie house, to the northwardes of Mackum, these are good thwart marks of the Middle-ground. The longst markes are: Kinswaert (that is the runner) commeth behind the church of Surich, then you are right in the farewaie. The Church of Surigh standeth upon the water side, upon a point that lyeth out about northeast and by north from the buy, or when the flat steeple of Wynaem (to the northwards of Harlingen) commeth betwixt Midlum and the east end of Harlingen, then you are rigt in the Middle-ground, on which side that Wynaem standeth nearest, that shoare you are alsoo nearest unto, the west shoare is steep; the east shoare indifferent flat, you may runne over it in three fathom, and come againe in five fathom towards Friesland. From the Middle-ground outwards to the Flye, you can sail within no tayles of sand on the west shoare.

Being past the buy in the Middle-ground, then goe on northnorthwest unto the buy upon Swanebalgh, which lyeth in 3 fathom on the east shoare, the thwart marks there of are Bolswaert over a little short house to the southwards of Cornwaert. When you runne over betwixt

betwixt the buyes of the Middle-ground and Swanebalgh on the east shoare more easterly then in three fathome, that you come againe in four or five fathom, you might (in sayling out) sail behind the shoals of Swanebalgh, or when you are bound in behinde the shoals of the Middle-ground, the west shoare thwart of this, you may sound in four fathom, or three fathom and a half, over against the buye upon Swanebalgh, on the west shoare is good ground for to anchor in.

From the buy upon Swane-balgh to the buy upon Schuytesand the course is northwest somewhat northerly: the thwart markes there of are Wynaem over the highest part of Harlingen: the longst markes are, Bolswaert the northwards of the Sluys, which lyeth to the northwards of Woens: this buye lyeth in six fathom on the east shoare, upon a taile or point, which you might sayle within when you sayle out, the right deepe thwart of it is 7 and 8 fathom, the west shoare is indifferent flat, which you may sounde in 4 fathom, the east shoare is steepe, but a little without the buye it is flatte all alongst to Keesshoeck, and you may sound it all alongst unto the Sloot. In sailing up, you might sail within the west shoare over against Schuytesand, or a little to the southwards of it in 3 fathom, or 3 fathom and a half into a Deadbalg, behind a taile of sand, called the point of the Waert, but keeping in 4 fathom from that shoare, you cannot take hurt of it. In sailing up with a forsloud, keep the east shoare, or els you should be lightly carried therwith into the foresaid balgh, behind that Waert, before you should be aware of it. Upon the point of that waert standeth a drift beacon, & 2 to the northwards or the westwards of it, which men do call the beacons of Claesoomen, and to the southwards of it standeth a beacon upon Dominicus plate, or (as the Pilots do name it) Meynsen plate. The marks for to sail alongst this long reach are: Mackum with a mill upon the water side, and a village with a little flat steeple to the southwards of Mackum, called Idsegahuysen, when Pandragen commeth betwixt Mackum and that village then you shall go cleare of that foresayd taile or Deadbalg: If Pandragen come nearest to Idsegahuysen, then you are to near the foresaid taile or plate, or if Pandragen come nearest to Mackum, then you are too neare the east shoare.

From Schuytsand to the buye upon Keesshoeck, the course is w. n. w. or northwest and by w. according as the wind & tide shall be. In that long reach goe little more then half tides alongst the deep, the afterfloud & fore-eb fall thwart over there to the westwards, & the after-eb & fore-floud right contrarie to the eastwards. The marks of the buy upon Keesshoeck, are Franiker steeple betwixt the mill & the towne of Harlingen, or to the mastes of the Schips which lye in the haven.

This buy lyeth on the east shoare, the right farewaye thwart of it is 8, 9 and ten fathom deep.

Betwixt Keesshoeck and Schuytesand, or betwixt the beakons of Claesoomen & the point of the water lyeth a little narrouw plate alongst the reach, allmost in the middest of the fareway nearest to the west shoare, where upon it is not deeper then four fathom, or 3 fathom and an halfe, when men runne to windewards they are over it with 2 or 3 casts of the lead.

Westwards from the buy upon Keesshoeck lyeth the Old-Flye, it lyeth in first southsouthwest and then forth to the buy upon the Nesse in the Tessel-stream. The after sloud with the fore ebb fall in verie strong into this channell. In sailing upwards you might sail within it in 4 fathom. The marks of it are, the steeple of Franiker right to the southwards of the steeple of Harlingen. From thence outwards off unto Schieringshals the west shoare is verie steep, in eight fathom you shall be close by the shoare. The fareway betwixt these buyes, and thwart of the buye upon the Ellbowe is tenne and eleven fathom deep.

From Keesshoeck to Wolfshoeck the course is first northwest and northwest and by north unto the buye betwixt them both, by some called the Schor-tun and by the Pilots the buy upon the Elbowe: and from thence to the buy upon Wolfshoeck, north, or somewhat more easterly, which lyeth in four fathom on the east shoare. Schor tun or the buy upon the Ellbow.

From the buy upon Wolfshoeck unto the buy unto Schieringshals the course is northnorthwest, & north w. and by north according as the winde and tyde shall be. To the northwards or to the eastwards of the buy upon Wolfshoecke goeth up a broade bight southeast farre into the groundes, so deep as the right farewaie, called the Inschot, comming in you might sayle within in seven fathom, the foresloud falleth from Schieringshals verie strong into it, and the fore ebbe to the contrarie, very strong out of it upon the taile of Schieringhshals, where by manie ships are miscarried. Schieringshals. The Inschot.

Schieringshals is a tail of sand, which shooteth off from the west shoare, upon it lyeth a white buye in three or four fathom, comming in from without, men might saile within it in sixe fathom, the right deepe betwixt Wolfshoeck and Schieringshals is nine fathom.

From Schieringhshals to Longsand, the course is northwest, and northwest and by north, betwixt them both on the west shoare it is shallow water, and the best roade off al the Flye streame, there goeth also little tyde. The right deepe is eight, nine and ten fathom, Longsand men might sail within it on the east shoare, in sayling up, but if they keep themselves in 7 or 8 fathom, they shall not come too neare neither of Longesand nor Schieringshals. When the eastermost house upon Grindt commeth a little to the northwards of the westermost, then you have even the lenght of the buye upon Longsand. From Longsand to the Sloot the course is forth northnorth w. the right deep is tenne fathome, or men runne alongst by the beakons upon Crakesand untill they come into the Sloot. Longsand. Monksloot.

The Island Flyeland is three leagues long, and a land very easy to be known: upon the east end lye high white sand-hilles, and to the westwards it is a land ful of short low hommocks or knobbs. Upon the west end standeth a Church with a mill to the eastwards of it. From the west end shooteth off a riffe a good waies into sea. To the westwards of this riffe, betwixt Flyeland & the Eyerland goeth in a deep, called the Westergat, or Westfiel-deepe, which is not for great ships, but onely for Fisher boates, there is not above 8 or 10 foote water. Upon the east end standeth a mill with a Cape, the which are markes for to avoyd the grounds which lye before the Flye.

The east end of Flyeland, and the west end off Tessel lye eight leagues asunder.

Eastwards from Vlieland lyeth der Schellingh, and is about three leagues long. Upon it stand two Churches and upon the west end thereof it hath an high stubbed tower, called Brandaries, and by it standeth a Mill, about the middle of the land standeth a sharpe steeple called Midlands. East thereof standeth another Spire steeple, called the Hoorn: betweene Midland, and the Hoorn standeth a mill. On the east end there lye little hills or downes. Upon the west end standeth a Light-house upon which there is fire at night, and two Capes, the biggest serveth as a Marck of the easterne Booms channell, and the least for the westerne Booms-channell. Der Schelling.

Stortemelck.

To sayle into Stortemelck (that is the Landdeep of Vlieland) bring the Cape that is on the east end of Vlieland and the Lighthouse together, they shall then strand from you southsoutheast or a little easterly, sayle there upon, and you shall fall right upon the first buy, that lyeth on five fathom, on the outermost of the long Banke, the Banke is on the northside reasonable plaine, so that those who come out of the north may

run thereby upon the lead in five or ſix fathom, and ſo likewiſe find the outermoſt Buy. If neede require men may run over the end of the long banke, but not too farr eaſtwards of the outermoſt buy in three fathom or eighteen foot, towards the ſhoare though not eaſtwards of the ſecond Buy, but a good way weſtwards, lyeth right ſouthwards the poynt of another ſmall tayle, whereupon neere the buy is no more then eleven foote water, betweene this tayle and the long bancke runneth a Chopp in the ground to the eaſtwards off five fathom deepe. It happeneth ſometimes that ſhippes comming over the end of the long bancke and finding againe deeper water, doe thinke themſelves to bee in the right depth of Stortemelck, where upon they luffe but runne in the foreſayd Chopp in betwixt the two foreſayd tayles, and if with a weſterly wind not without greate danger, and yet muſt run out againe backwards. Comming out of the weſt alongſt by Vlieland in foure or five fathom, you ſhall not miſſe to run the foreſayd outermoſt buy in ſight: Hee that in the night falleth about Stortemelck let him bring the lighthouſe ſouthſoutheaſt from him, and run there upon till hee come neerer the ſhoare hee ſhall run to the weſtwards of the outermoſt buy, within Stortemelck there lye 7 blacke buyes with one white buy, ſayling in leave all the blacke on the larboard and run alongſt the ſouthwarde, leave the white on the ſtarboard, even as all orther white buyes as well in Booms-channell, the Ietting as upon the Vlieſtream.

In comming from Stortemelck you muſt ſomewhat ſhun the ſhoar for it hath a ſhoale right over againſt the firſt buy.

The ſecond Buy called the outtermoſt Drooge drie lyeth on eleven foote upon the ridge or the ſhoaleſt of the channell, ſouth thereof is alſo not more then 11 foot water, and a little further againe 16 foote deepe. The third is called the innermoſt Drooge drie lyeth on 16 foothe the right depth betweene both is 3 fathom. The fourth is called Heyckhoeck, betweene this and the third the right depth is in five fathom, over againſt the fourth lyeth the white Buy on the ſtrand, hard by runneth a little tayle from the ſhoare, which you may under ſayle when you ſayle outwards to this white Buy, or to the third from without it ſtretcheth eaſtnortheaſt in, from the fourth to the fifth allmoſt eaſt, & further more and more ſoutherly. The fifth Buy is called the outtermoſt corner Buy, the ſixth the middlemoſt corner Buy, and the ſeventh or laſt the innermoſt cornerbuy, betwixt the outtermoſt and middlemoſt corner buy, the next outtermoſt runneth a tayle from the ſhoare which you may under ſayle from without, this groweth ſometimes allmoſt as farr as the Buy, then breaketh the depth by the wall againe through and ſcoures the tayle wholly to the north ſhoare, from the innermoſt buy men run forth alongſt by the ſtrand of Vlieland, or ſouthward to the Buy upon the plate.

Ooſterbooms-gat.

The Ooſterbooms-gat is altered very much, the Schorre-grounds or as ſome calls them now a dayes Peters-grounds, are overgrowne verry neere to the ſhore or ſtrand of the Schellingh: Before it lyes a Banck or a little ſand-plate, betwixt the aforeſaid Schorre-or Peters-grounds and the ſtrand is according to the Theſtimony off Maſters (or Schippers) which uſually ſayle in and out with their Smack ſhipps: about the halfe off a ſhipps length broad, and about two ſhipps length long, is upon the plate or Banck five and ſix foote, and betweene the Banck and the ſtrand ſeven and eight foote, but betweene the Schorre-or Peters-grounds well eleven or twelve foote water; So that if heere lay on the corner of the Schorre-or Peters-grounds a tunne or Marcke, to decerne or finde this entrance or gapp, one could then verry eaſily ſayle in and out with a Fluyt-ſhipp, but ſeeing the place is not marcked with a tunne, it is judged unfit to bee uſed by great ſhipps, and onely navigable for Smacks: Comming from the eaſt, and haveing Midlands-church, ſtanding upon the Schellingh, ſouthſoutheaſt from you, then you are neere about this ſaid banck, and ſeeing there is nothing elſſe to be written off this Ooſterbooms-gat, we will leave it, and paſſe over to the deſcription and ſituation off the Weſterbooms-gat.

The Weſterne Booms Channell.

To ſayle into the weſterne Booms Channell comming from the weſt, bring the Cape and tower of Brandaries together, that is then eaſt and eaſt and by ſouth from you, thereupon you muſt run to find the outermoſt Buy, there is ſix fathom water, keepe then the Cape and tower ſo ſtanding till you come to the ſecond buy, bring then the tower a great handſpikes length to ſouthwards the Cape, and ſayle thereupon, then you ſhall ſayle betwixt a white and black buy, there is it upon the ſhoaleſt 17 foote with low water, from thence you come to ſix and ſeven fathom, & then you come againe in the right Booms Channell, on the northwall it is the deepeſt, it is wide and broad that you could wel verreit up, the ſtream runs there of it ſelfe right in in ſtill weather.

To ſayle into the Jetting, comming through the Robbegat, about the Roſyne plate, you muſt run towards the buy upon Langeſant, and forth betweene the white and black buy, leaving in ſailing up the black on the larboard and the white on the ſtarboard till you come by the beakons upon the Nakens, you may eaſly ſee from buy to buy, ſayle then forth alongſt by the Beakons upon the Nakens eaſtſoutheaſt on till Brandaries commeth hard by Grind, but not upon it, keepe them ſo ſtanding, and run ſouthwards on and you ſhall ſaile upon the buy on the tayle of Hendrick 't Iaerts plate, theſe you may under ſayle on the eaſt ſide, leave them on your larboard, and run on weſt away ſouthſoutheaſt to the laſt Buy that lyeth upon the ſouth poynt of the foreſayd Hendrick 't Iaerts plate. Over againſt the Beakons upon the Nakens lye on the ſouthwall two white buyes, the moſt eaſterly lyeth upon the tayle which ſayling off you may underſayle ſouthwards betweene the two laſt blacke buyes, by the weſt coaſt is the Roade where the ſhips (which are bound to Harlingen) ſet on to lighten. The Ietting

NOTE.

All the depths here before rehearſed, as well of Stortemelck as of the Boomkens-gat, are ſayd of the loweſt water, at halfe flood is three foot deeper, it floweth upon theſe at the foreſayd places with a common tyde 5 and a half or 6 foot up and downe. The numbers of the depths ſet downe in the carde of the Flye and Ameland-gat, are to be underſtood of feet: as for example, by the outer buy of the Boomkens gat ſtand 66, that are 66 foot, or eleven fathom, ſixe foote being reckoned for a fathome.

Ameland-gat.

Two leagues to the eaſtwardes of the Schelling lyeth Ameland, lying eaſtnortheaſt and weſt ſouthweſt foure great leagues. Upon the weſt end of Ameland ſtandeth a Cape, and a great thick flat ſteeple, called the Hoelme, the rooſe of this Church is broken off, but the after front with the rooſe ſtandeth above the ſide walls, to the eaſtwards of the Church of Hoelm ſtandeth a mill, with a houſe to the weſtwards of the mill, alſo a broad flat tower. About the place where Midland-church was wont to ſtand, lye three or foure white ſandhilles, which are low, flat, & long, towards the eaſt end it is knobbie land, with white amongſt it. From the weſt end of Ameland runneth off a riff, almoſt three leagues into ſea, called Born-riff, which is upon the outer ſide verie ſteep: come no

Born riff.

no nearer it then in 12 fathom, comming from the eastwards you cannot saile withem it, but sailing alongst by it in seven fathom, you shall not run a bowles cast along without it.

For to saile into Ameland-gat, comming out of the sea, bring the cape upon the east end of the Schelling, right over the steeple of Horne, which shall then stand from you southsouthwest or a little more westerly, sayle in right with them, untill that the Cape upon Ameland, and the steeple of Hoelme are one over the other, then leave the first markes, and saile in upon the second, and you shall finde the outermost buye, which lyeth somewhat within the outermost point of Born-riff. Comming from the westwards, run alongst by the strand of the Schelling in five, or five fathom and an halfe at low water, and you shall not fail to saile right upon the outermost buye, & then the C. & steeple upon Ameland shall also come one over the other, and stand from you east, or a little more southerly. Comming alongst by the Schelling in four fathome, you shal not saile within the Koggedeeps ground, over against then lyeth the first buye on the south side of Bornerif, run alongst to the southwards of it, keeping the Cape and steeple one over the other, untill you be past the second buye, which lyeth twart of the west end of Kamper sand, the fareway betwixt these two buyes is five and sixe fathome deep.

Koggedeeps ground

Kamper sand.

The Ierting.

Being past the second buye, bring the steeple somewhat to the northwards of the Cape, and goe on east-n. e. towardes the third buye upon Gerritshonden, for to avoide the plate which lyeth off from the south side, towardes Bornriff, on it lye two white buyes, the first over against the a foresaid third black buye, the other over against the fourth black buye, lying from the third about southeast, leave the black buyes all on the larboard side, and the white on the starboard side, and run through so betwixt them both, the plate is on the north side indifferent flat, so that you may run to it upon the lead, rekon wel your tydes, especially be carefull of a fore-ebbe, which falleth very strong over that channell northnorthwest into sea over Bornriffe. Betwixt the second and third buye in the fareway it is eight and nine fathom. Betwixt the third and the foresayd plate seven fathom. Being past the fourth buye, both sides are very steepe, & the fareway eight, nine, ten, and twelve fathom deepe, goe then in southsoutheast, until that the steeple of Holm come over the south point of Ameland where the boats lye, and then you come in the bight, where it is on the s. side flat, and good anchoring in 5 or 6 fathom, the north shoare is very steepe.

Gerritshonden.

Born rif.

For to sayle further into Horsen, go away from the bight eastnortheast alongst by the south side in five or six fathom, so long untill Heynooms chamber (being a red tyled house) come a handspikes length to the northwards or to the eastwards of Hoelm-church, anchor there in five or six fathom, you shall lye there in good ground, & sheltred for all winds, also there goeth little tyde; in this fareway it is twelve fathom deepe, the north shoare is there very steep. These foresayd depths (like as also those of the Flye) are sayd of low water.

Of the tides.

At Amsterdam a northeast and s. w. moone maketh the highest water.

At Horne, Enckhuysen, and at *Urck*, a north & south moone.

Betwixt Cripple-sand, and the Creyl, a n. & by w. & s. and by e. moone.

Upon the Frieze and Wieringer flat, a n. w. and s. e. moone.

In the Flye & Ameland-gat a southeast & n. w. moon maketh high water, before the Flye the flood falleth to the eastwards thwart over the grounds, almost untill halfe flood before it setteth into Boomkens gat. Likewise the Ebbe to the contrary falleth to the westwards thwart over de grounds, almost untill half Ebbe, before it setteth right out at the channell. The afterflood turneth about with the fore ebbe and fall alongst Flyeland out at Stortemelck, but the foreflood runneth right into Stortemelck.

Of the depths about these places and in what depths men may see the land.

The Islands Flyeland, the Schelling, and Tessel, men may see in 15 and 16 fathom. Thwart of the Schelling the ground is white sand.

The steep grounds or Petersand and Born-riffe, are very steepe on the off side, close by them it is 12 or 13 fathom deepe.

Ameland men may see in 12 fathom, the depth of 13 and 14 fathom runneth farr off to seawards, so that men cannot see it in 15 fathom.

Courses and Distances.

From the Flye to the Naes, n. & by e. a little easterly about 85 leagues.

From the Flye unto the Riffe in 16 fathom n. and by e. 66 or 67 leagues.

From Flye to Boevenberghen, the course is ninie. or a little more easterly about 69 leagues.

From the Flye to Rinkopper, or Numer-deep, n.n.e. or a little more easterly about 58 leagues.

From the Flye to the Island Silt, on the coast of Jutland, the course is northeast 46 leagues.

From Born-riffe to the Naes, the course is north or a little more easterly 82 leagues.

From Born-riffe to Holy Land, northeast and by east 30 leagues.

From Born-riffe to Wrangheroogh, eastnorthast 27 leagues.

From Born-riffe to the Wester-Eems 12 leagues.

Peter-sand, or the steepe grounds & Born-riffe, lye n. e. and by e. and southwest and by west foure leagues a sunder

From the Flye to the n. e. end of the Broad fourteens, the course is w. n. w. 8 leagues.

From the Flye to Tinmouth or Newcastle, westnorthwest 88 leagues.

From the Flye to Hitland, the course is n. w. & by north, somewhat northerly 156 leagues.

From the Flye to *Fairehill*, northwest & by north about 151 leagues.

From the Flye to *Scuytenes*, the course is north & by w. somewhat northerly 106 leagues.

How theſe Lands doe shew themſelves at Sea.



Thus ſheweth the Schelling when you ſayle alongſt by it about two leagues from the Land.



Thus ſheweth Flyeland when jou are two leagues thwart off from it.



Ameland ſheweth it ſelfe thus; when jou are two leagues twart off from it.

The ſecond Demonſtration,

Where in

The Scholbalgh, Lauwers, both the Eemſes, the Weſer, the Elve, & the Eyder, and other channels of the Sea betweene them.

Schiermonck-oogh.

SChiermonck-oog lyeth from the eaſt end of Ameland eaſt ſomewhat northerly 3 leagues, it is a little low plaine Iſland, about 2 leagues long, there ſtandeth no ſpeciall thing upon it to bee knowne, but upon the weſt end two capes, with a white ſand-hill, otherwiſe it is all with low blackiſh ſand-hils, or hommocks, (but higher then upon the eaſt end) and mingled with white: the eaſt end is a long flat ſtrand, with little low rough ſand-hills. When you bring the two capes upon the weſt end one in the other, and runne ſo in, you ſhal finde the outermoſt buye, which lyeth without the channell, at ſea, in 7 fathom, or there abouts. Sometimes there lye two and ſometimes three buyes in the channell, which you muſt leave on the ſtarboardſide, and runne alongſt to the eaſtwards of them, being come within the channell, you ſhal find alſo beacons on the weſt ſhoare, which you muſt follow all along, untill you come to Oſtmerhorn, where you may anchor. The lying in, and depths of that channell do alter and ſhift oftentimes, and ſometimes much within a ſhort time, ſo that there is no certaintie to be written off it, where unto men might truſt.

Rottum.

Foure leagues to the eaſtwards of Schiermonckoogh lyeth the Iſland Rottum, and betwixt them the little Iſland the Boſch. A few yeares paſt through, ſetting off ſpyrie graſſe or heath, there was grown two or three handſome ſand-hils, but are now againe altogether blowne away, and altered into a plaine flat ſtrande, which the ſea at high flouds doth altogether runne over.

Betwixt theſe Iſlands the Boſch & Schiermonckoogh was wont to goe in a channel of indifferent depth, called the Lawers, which is now moſt caſt too, by the foreſayd ſtrand of the Boſch, which is wrown in all alongſt unto the oogh, ſo that there is no more remaining, then a narrow & ſhoale creeck.

To the eaſtwards of the Boſch goeth in the Schille, alſo an altering & uncertain channell, which is ſometimes deepe, and ſometimes againe ſhoale, and the channell ſhifteth too and againe, ſoo that there is no certaintie to be written of it, whereunto men might truſt.

The Iſland Rottum is a little Iſland, about a league & half long, and very eaſy to be knowne, the weſt end is high and ſteep, the reſt is low land with ſome little ſand-hills. Upon the eaſt end ſtand two capes, the greateſt or the runner ſtandeth upon the eaſt end upon the flat ſtrand, the ſmalleſt on the ſouth ſide of the ſand-hall. There ſtand alſo twe houſes upon it, the one upon the weſt end, the other in the middſt of the Iſland in a valley.

Borckum is alſo an Iſland eaſy to be knowne, two great leagues long, it ariſeth commonly (when you come in out of the ſea) in three parts, as if it were three Iſlands, when you come from the weſtwards, it ſheweth it ſelf in foure parts, for with high flouds the water runneth through in 3 places. The Worthy Counſell of Embden hath cauſed to be ſet upon the weſt end a high thick ſteeple, which men may ſee far off at ſea, on the weſt ſide of that ſteeple ſtandeth a little low church. Borckum.

From the weſt end of Borckum ſhooteth off a riffe, a great wayes into ſea, called Burckum-riffe: To the ſouthwards of it, to witt betwixt Borckum & Rottum, goeth in the weſter-Eems, which is the verie beſt channell that lyeth in all this coaſt.

The Old or weſterne Eems.

Bring the Capes upon Rottum together, and they ſhall then ſtand ſoutheaſt and ſomewhat more eaſterly, if you come out of the ſea, ſayle reſolutely upon them, then ſhall you find the outermoſt Buy, then ſhall you have the Tower of Borckum eaſt and more ſoutherly from you, & the weſt end of Rottum ſoutheaſt and by ſouth, and lyes upon the tayle of Geltſacks-plate, there is a white buy with a little flagge, and lyeth upon 6 fathom with low water, and is marked in the Card with the letter *a*. Geltſacks-plate.

From the firſt to the ſecond, the courſe is ſoutheaſt and by ſout, is marked with letter *b*, and is the firſt black buy upon 7 fathom on the ſouth ſhoare, let this buy in your ſayling in lye on your ſtarboard, and the white on your larboard, then have you from this foreſayd black buy, the tower upon Borckum eaſt and the Capes upon Rottum ſoutheaſt and by e. from you, from the firſt black buy to the ſecond, third, and fourth buy marked with the letters, *c*, *d*, *e*, your courſe is eaſt and by ſouth.

Comming from the w. neere the Lauwers or Boſſandt, keepe the ſtroake of the ſhoare upon 5. fathom, till you are paſt it, ſayle then freely eaſtwards on, ſo ſhall you run within through Geltſacks-plate in five, foure, and three fathom, afterwards on eight fathom, and ſo come by the fourth black buy which lyeth in foure fathom.

The

Bore-
kum.

Gelr-
sack-
plan.

Dollart

Ryd

Ouerdum

Duytsche mylen 15 in een graet

Fra. en Eng. mylen 20 in een graet

Farmsum

Aytinge Dam

Delfzyl

Lens

Wyuelsum

Knock

Bees loer

Larrelt

Wpeyrde

Holwyrde

GRONNINGER

LANDT.

Emden

Ryssum

Mierum

Spyck

Vmmyrde

Hoorhuysen

Nyland

Vnthuysen

Warffum

Warffumerzyl

OOST-FRIES

LANDT.

Eems-hoorn

Pilsum

Grietzyl

Schuyrm

Sant

t Wad

Norden

Itschendorp

Borckum

Wester

Ooster Eems

Norderney

Pascaarte
vande
EEMSEN,
Als de oude ofte weester Eems
en de ooster Eems.

Sommige namen op de Eems met letters a

d	de Wolden	y	't Schilt
h	De nieuwe Cuype op Borckum	h	de Inins
G	Baecke op de hoge hoern	x	Norden W
D	de Wester Eems	y	Borckumer
E	t Vooren diep	z	Lester riff
F	de Buiers balge	a	Ton voor d
G	Memer balge	b	Reyder sant
H	de Weester balge	c	de Paep
I	de Bankt balge	d	de Hont
K	de Leye	e	Pilsumer
L	de Bremer balge	f	de Swyne
M	t Graeit	g	de Comx
N	Baecke gat	h	Coppers
O	t Wad	i	Memer sant
P	Nyebers balge	k	Rysumer
Q	de Hoecks	l	Browers
R	Lagers gat	m	Roxbers
S	Ouer voor Lagers gat		de Min

a 't Robbe gat
b Speckboeck
c Noord Ietting
d
e

Harlingen

FRIESLANDT.

Swarte balgh

Schaere Sande

Keuhoek

Ielschot

Broom

Grind

DERSCHELLING

Hoorn

Casp

Midlands

Amelander Gat

Brandaris

Casp

Casp

Vlieter

VLIE-LANDT

Ooster booms gat

Schorre gronden

west droge Sant

Wester booms gat

Duytsche mylen 15 in een graet

Spaensche mylen 17½ in een graet

Pascaarte
van't
VLIE.
Als mede een gedeelt van't
Amelander gat.

Pascaerte Vande EEMS, ELVE,

Weser, Eyder, en de Hever: als mede hoe die selbighe gaten van Heyligh-landt gelegen syn.

EMDE

KEYDIN:

GER-LANT

EYDER

Pascaerte vande EEMS, ELVE, Weser, Eyder, en de Hever: als mede hoe die selbighe gaten van Heyligh-landt gelegen syn.

Op de Elve
De Schorton
Coolhoot
Witte ton op de mu-we gronden
Roeton
Ros ton
Witte ton opde Steert van Roomaerder plaet
De tonnen op Pelgroms sandt
Op de Eyder
De wyterste Eyder ton
Ton opde Hont
Baken op de Hont
Yseren Hendrick
Baken op den Yseren Hendrick
De yyt nade Elve
Noordemer sant
Eylandeke Bulhoofde
Baken opde Hilck

Blixum
Groot Tossens
Eyder
Nyer zyl
De Hooghe
Bolrazyl
Bloeck zyl
Hormer zyl
Mysen
Oyl
Wat
Oldenbroeck
Groin
Rysenbuttel
Rosbaken
Tentel
Wire
Tronden
Hitsumer sandt
Noorder Elf
Vlacte of steert van Vogelsandt
Noorder grondt
Vlacte van de Noorder grondt
Zuyder eyt
Noorder eyt
Buse
Zuyddyck
Wislingburen
Noorddyc
Blauwort
Steert of vlacte van Blauwort
De Eyder
Schulperzyl
Tatingen
Ea
Kating
S. Peter
onningen
Harrebleck
Gardingen
Suyder hoofden
Oosser Hever
Husum
Suydbalgh
Hadstede
Hever
STEDT.
Scholvershoet
Heyligе-lant
Middel zant
De Wester
Oosser wester Weser
Zuyder brechaly of oosser Ely
Noorder brechaly of oosser Ely

Dollart

Groeninger

Emden

Norden

Ischendorp

Wesserbroeck

Borckom

Wester Ems

Ooster Ems

Oostmerhorn

FRIESLANDT

Duytsche mylen 15 in een graet

Spaensche mylen 17 ½ in een graet

Eng. en Fra. mylen 20 in een graet

Borckummer riffe.

The Borckummer riffe commeth on from without and is flat on the end, when as the Capes upon Rottum ſtand ſoutheaſt off then come you over the riffe, and ſhall come upon the tayle of the riff with low water with leſſe then ſeven dutch elles depth of water, for it is flatte and broad, on the inner ſide it is very high and ſteep, and ſhootes with a breſt inwards but you may caſt your lead well upon it.

From the fourth buy till within the bending of Rottum the courſe is eaſtſoutheaſt, is marked with *f*, and lyeth upon 7 fathom, from this to the buy upon the high plate and is the ſixth buy marked with *g*, and lyeth upon 7 fathom, as alſo to the Huyberts buy *h*, the courſe is eaſt and by ſouth, when the Cape upon the ſouth-ſide and the tower come together they ſtand ſouthſouthweſt from one another, ſo are you even with the outtermoſt Huyberts buy, goe then eaſtſoutheaſt on to the innermoſt Huyberts buy marked with *i*, which lyeth alſo even as the firſt Huyberts buy in 6 fathom, upon the weſt ſide of theſe buyes you have Huyberts plate, which is now devided from Huyberts ſand, and you may under ſayle it with low water, and is in the fareway 12, 13 & 14 fathom deepe, from the innermoſt Huyberts buy marked with *i*, to the buy before the Watt, called Steven Janſs buy, marked with *k*, the courſe is ſoutheaſt and lyeth on eight fathom *k*, comming alongſt by the buy ou Huyberts plate, you muſt leave Borckum a little that ſo you may ſhun the Mieuwen tayle which ſhooteth from off the Wolds or the ſouth end of Borckum, this you may under ſayle upon 5 fathom when you come inwards.

Steven Janſs buy.

Mieuwen tayle.

Weſtwards from Steven Janſs buy ſtand 5 beakons a little to the ſouthwards there goeth the Watt in north and by eaſt, almoſt as farr from Steven Janſs buy as the innermoſt Huyberts buy lyeth from Steven Janſs buy, there ſhooteth out alſo an out corner or riffe called Ranſel, but you may under ſayle it upon 5 fathom, the marks of this channell and how to ſhun the tayle or Ranſel are theſe, upon the ſouth end of Borckum lye two little downes, called the Wolden, keepe the tower of Borckum on the weſt ſide of thoſe little downes, ſo ſhall you not ſayle upon the Ranſel, in this channell it is deep nine and eight fathom.

Ranſel.

From Steven Janſs buy to Doecke buy *l*, the courſe is eaſtſoutheaſt, there find you (ſouthwards from this buy) a beakon *m*, called Ruytebaken, this buy lyeth upon five fathom, and in the fareway you have ſeven fathom deep, the flood falleth very ſtrong behind this buy into Doeckegat whereof you muſt beware, from the buy with the Doeck to the Camper buy the courſe is eaſt ſoutheaſt marked with *n*, from thence to the buy of Eemſhorn marked with *o*, the courſe is ſoutheaſt, lye both upon five fathom in the Midſt of the farewater it is 7 fathom deep, the marks of the Eemſhorn buy are theſe, when the Cloyſter of the Dam (being a flat Curch) commeth together with Holdwijck then have you the length of the buy; theſe marks ſtand then about ſouth and by weſt from you, ſtretching out from the buy of Eemſhorn you ſhall find on the ſouth ſhoare five beakons, ſayle about that from thence to the Groningerdike ſouthſouthweſt till you get the Church of Wtwyrde and the Cloyſter of the Dam together, betwixt to the ſhoare of Delftſayl, for being paſt the buy of the Doecke, then you muſt preſently ſound the weſt ſhoare as far as Otterdum in five, ſixe and ſeven fathom, and come not neerer them, for it is very ſteepe, the eaſt coaſt in ſayling up you may hereabout found upon ſix fathom, behind a plate called the Hondt, being a hard ſand, and ſomewhat more inward lyeth yet another plate called the Pape, alſo an hard ſand runneth through betweene both the creekes, but the weſt ſhoare is ſoft and clay ground as farre as Otterdum, you muſt keepe the weſt ſhoare and follow the beakons which ſtand alongſt the ſhoare, this reach ſtretches ſouthſoutheaſt and ſouth and by weſt, and ſo in the bending alongſt ſouthſoutheaſt, and by the Groninger land ſoutheaſt.

Ruyte baken.

Marks of the buy of Eemshorn.

For to avoyd Reyderſand or Jannens ſand, that is a plate in the middeſt of the Eems, betwixt Otterdum and Reyde, where upon at low water it is ten foote, you muſt looke out for Otterdum a flat church, without a ſteeple, ſtanding in Groningerland on the dyke, when you come thwart of it, edge over to Embderland, to wit, to the Knock, which is a ſteeple broken of, ſtanding in the water upon the poynt, comming by the Knock, then runne within two cables length along by the north ſhoare unto Loegerhorn, and then you ſhall not ſail too near the plate. There ſtandeth a flat ſteeple betwixt the Knock & Loegerhorne, called Gerritſwaert, when you can ſee through that ſteeple, or when that ſteeple and the church come one to the other, then are you thwart of that foreſaid plate.

Reyder.

When you ſail up the Weſtern Eems, you muſt leave all the buyes on the ſtarboard ſide.

A ſoutheaſt and northweſt moon maketh without the Eems the higheſt water. In the Balgh a ſouthſoutheaſt and northnorthweſt moone: Before the towne of Embden, a ſouth, or ſouth & by weſt, and a north or north and by eaſt moone.

The Iſland Juyſt lyeth a great league, or a a league & a half eaſtnortheaſt from Borckum, which is a little low Iſland, the weſt end is a high ſteep poynt & gray land, the eaſt end is higher then the middeſt. The church ſtandeth in the midſt upon the land; the ſteeple is ſomewhat ſharpe, and ſtandeth at the eaſt end of the church for you cannot ſee the church, but thwart of a low place or valley. Betwixt Borckum & Juyſt goeth in the eaſtern Eems. From the weſt end of Juyſt lyeth off a riffe two leagues, or 2 leagues & a half weſt into ſea, on the off ſide you may ſound it in 3 or 4 fathom, to the ſouthwards of it goeth in the eaſtern Eems.

Iſland Juyſt.

The eaſterne Eems.

Run upon the grounds of Borckum in 5 fathom and ſet the tower of Borckum with the New Cape (which is of late there made) then will they ſtand ſouth from you, of if you come from the weſt, then keepe the tower upon Juyſt eaſt and eaſt and by north from you, ſo ſhall you find the firſt or outtermoſt buy in 5 fathom, from the outtermoſt to the ſecond to the courſe is eaſt and by north, from the ſecond to the third eaſtſoutheaſt, they lye all in 5 fathom in the farewaz, it is five, ſix, eight & ten fathom deep.

The end of the Juyſter riff, betweene the outtermoſt and the ſecond buy is upon the innermoſt ſide ſo extraordinary ſteep and riſing up, that you cannot ſound upon it, but more inwards from the ſecond buy it is flatter, there is good ſounding ground, the third buy lyeth upon the poynt of Brewers plate on the eaſt ſide of Borckum which you may under ſayle, the tayle is on the north ſide very ſteepe, from the third buy ſayle yet eaſt ſoutheaſt on till you come even with the beacon upon the Hooge-Horn, there is a good roade upon five, ſix, or 7 fathom, and good lying for a ſouth wind, then with a flood you muſt goe on eaſt & ſomewhat more northerly that you may ſo ſhun the poynt of the foreſayd Brewers plate, the Juyſter riff is inwards from the ſecond buy flatt, ſo that you may ſound in 5 or 6 fathum when you are a little eaſtwards the third buy, goe then ſoutheaſt on: the eaſtern Eems is thereabout wide and broad. The eaſt end of Borckum is flatt, then you muſt not forget to ſound when you ſayle out or with a ſhip that draweth much water, and if it bee with a ſoutheaſt courſe then come you upon the Conings plate upon the poynt or tayle of which lyeth a buy, and upon the plate a Beakon, this buy and Beakon you muſt bring on your ſtarboard. To the north in eaſt Frieſland ſtand two towers one by another of which the one is ſtumpy and great and the other low and ſmall, when theſe towers come with the north end of Bandt a little Iſland upon the WATT even one with another, then have you the Buy upon

Brewers plate.

Conings plate.

Conings

Conings-plate they are good longſt Marks, and when Juyſter-tower commeth northnortheaſt from you, they are good thwart Marks of the ſame buy.

From the buy upon the Conings-plate to the buy upon the Weſternbalgh the couſe is ſoutheaſt till you get the two Capes upon Bandt together, that is the buy ſouthſouthweſt from you, from the firſt buy upon the weſternbalgh to the ſecond, the courſe is ſouthweſt even as the whole weſternbalgh is, you ſhall not miſſe (if you keepe both the Capes upon Bandt together) to run out of the balgh but at laſt a little more weſterly.

From the balgh beacon to the beacon upon Eems-horn the courſe is ſouth and north, to ſayle through the channell from theſe beacons forth to the Cnock the courſe is ſouthſoutheaſt, from thence to Loegen eaſt.

Memerbalgh. About a half league within Juyſt, betwixt the beacon upon the High Horn, and the buye upon Kings-plate on the eaſt ſide of the Eaſter Eems lyeth Memerbalgh. It lyeth in moſt north, that is a good road for ſmall ſhipps, that are bound to the weſtwards, or out into ſea. Within the balgh he that runneth by the High Horne ſhall finde good road for ſmall ſhips, that are bound to the eaſtwards, which lyeth in ſouth.

Comming from the eaſtwards, you may ſound Juyſtriff which is flat on the off-ſide, without, in the point of the riffe is a ſhoare or Deadbalgh, with 2 points, betwixt them it is 3 fathom and an half deepe.

A ſouthſoutheaſt and a northnorthweſt moone maketh (without in the Eaſter Eems) the higheſt water.

To the eaſt of Juyſt lyeth Buys, the ſhorteſt and ſmalleſt Iſland that is upon all this coaſt. It riſch up in two Hommocks, where of the one Hommock, which is the moſt eaſterly is the higheſt and ſharpeſt.

Buyſdeep. Betwixt Juyſt & Buys goeth in the Buyſdeepe: the Wor. Counſell of Embden was wont to ſet it with Buyes, but it is done no more, in regard it doth ſo oftentimes ſhift.

Norderny. Two great leagues to the eaſtwards of Juyſt lyeth Norderny, betwixt them both lyeth that little Iſland Buys. Norderny is to be known by a broad flat tower, which ſtandeth upon the weſt end, but ſometimes men can hardly perceive it. About the midſt of the Iſland, neareſt the eaſt end lyeth a high white ſand-hill, thereby it is beſt to be known. Further the land is full of Hommocks. Betwixt Norderny and Buys goeth in a channell, called the Norder-deepe, or Norderny.

Baltrum. A great league to the eaſtwards of Norderny lyeth the Iſland Baltrum, which is about two leagues long, a little ſhorter then Norderny. Upon this Iſland ſtandeth no ſpeciall thing, whereby men may know it: but upon the eaſt end a high ſand-hill, which is ſharp above, the weſt end is low ſand-hills. When the foreſay high ſand-hills is ſoutheaſt and by eaſt from you then it is round to ſee to: Upon the weſt end there goeth a ſwamp through.

Which tery. Betwixt Baltrum and Norderny runneth in a channell, called the Whichterie, there is no certainty to be written of it, that men may truſt to, ſometimes there is 2 fathom water, & more, & ſometimes no more then 4 or 5 foote.

The Iſland Langeroogh lyeth a league to the eaſtwards of Baltrum, which is foure great leagues long, and hath on the off-ſide a faire ſtrand, & thee or four ſand-hilles, where by men may know it, which lye from about the middeſt of the Iſland unto the weſt end, a good wayes one from the other, the tops of them are plaine and flat.

Acumy. Betwixt Langeroogh and Baltrum goeth in the Acumy, wherein lye 2 buyes. It is no channell for great ſhipps, it lyeth out alongſt by the foote ſtrand of Langeroogh, firſt northeaſt, & then ſomewhat more eaſterly, but it is not to be truſted to, becauſe it altereth and ſhifteth very often.

Spyckeroogh. Betwixt Langeroogh and Wrangeroogh lyeth the Iſland Spyckeroogh, which is about a league long. At the eaſt end there was wont to lye a little Iſland, eaſy to be known, called Luttick Spyckeroogh, which is now altogether gone. Upon Spyckeroogh ſtandeth nothing, whereby men might know it, but it is a black land, with Hommocks & Nobbes, like to the other Iſlands: Betwixt Spyckeroogh and Langeroogh goeth in the Oxebalgh. Oxebalgh

Wrangeroogh. Wrangeroogh lyeth two great leagues to the eaſtwards of Langeroogh, which is a great league long, being a little plaine white Iſland: Upon the eaſt end lye high broad white ſand-hills: Upon the weſt end the Earle of Oldenbourgh hath cauſed to be made a great thick tower, with two ſpires: when they ſtand one right in the other, then you are by the outer buy of the Weſer; the aforeſayd tower, men may ſee two kennings off at ſea. Betwixt Wrangeroogh and Spyckeroogh goeth in the Harrel, about ſouthſoutheaſt, but it is not to be truſted becauſe it ſhifteth very often. The Harrel

The Acumy and Harrelle are ſet both with buyes by the Wor. Counſell of Embden: Theſe channell ſerve not but for ſmall ſhips, like as all the other, lying betwixt the eaſtern Eems and the Weſer.

The Land lyeth from Bornriffe to Wrangeroogh eaſtnortheaſt and weſtſouthweſt 29, or ſome will have it 30 leagues.

For to ſayl into the Jade or Weſtern Weſer with a ſoutherly winde, runne to the ſtrand of Wrangeroogh in foure fathom, with a weſterly winde runne no further then five fathom, and lead it in ſo by the ſtrand of Wrangeroogh, in 4 or five fathom, untill you come a good wayes within, or to the end of foote ſtrand of Wrangeroogh, there you ſhall finde the firſt buye in 5 fathom at low water: Menferchurch ſhall then ſtand ſouth from you. Thwart of thiſt firſt buye the redde ſand is very ſteepe, which you muſt leave on the larboard ſide, and the buye on the ſtarboard ſide, when you come in. Thwart of this firſt buye commeth a tayle, ſhooting off from the ſouth ſhoare, that is the innermoſt point of the Stonebalgh, which men might, at unawares ſail within, in three fathom and an halfe, or foure fathom, the firſt buye is laid upon the point of this tayle. The Stonebalgh goeth in to the eaſtwards of Wrangeroogh the ſouth ſide where of is ſteep; but the north ſide flat, which men may ſound. In this Balgh it is ten foot deepe at low water. From the firſt buye to the ſecond, and alongſt to the third, the courſe is eaſt, the ſecond buy lyeth in two fathom and an half: The third, that is the Jade buye, lyeth in three fathom, upon the ſhoaleſt of the High-waye. It is very uneven betwixt the firſt and the third buye, you ſhall get wiſe depth of five or ſix fathom and then again two fathom, or two fathom and an half.

For to ſayle from the Jade to the Weſer then ſayle by the third buy over the ſhoaleſt of the High way on eaſtnortheaſt to the Mellembuye, and you ſhall finde at low water upon the foreſayd ſhoaleſt place, or by the third buy, no more water then nine or tenne foote, and being over there you ſhall get againe deeper water, and then you are in the Weſer: Reckon well your tydes, for the ebbe falleth very ſtrong northnorthweſt out at the Jade, and the flood to the contrarie, very hard inwards, ſo that you can hardly ſtemme the tyde when the weather is ſomewhat calme, whereof you muſt be very carefull.

For to ſayle up into the Iade, leave the foreſayd third buye on the larboard ſide, and go from thence moſt ſouth up, unto the poynt of the Dyke, called Hormerſcheel, when you are come by the Dyke, there the Iade is wide and broade, without the foreſayd Dyke ſtandeth a beacon or two, ſo ſhipps that are bound over the Wadt: If you will ſayle further up into the Iade, then keep the weſt ſhoare, untill you come thwart of the church without a ſteeple, which ſtandeth by the Dyke, there you muſt leave the weſt ſhoare, becauſe of the Aenten or Ieppe-plate, which ſhooteth off from the Veer, alongſt the weſt ſhoare, and ſometimes lyeth drye at low water. The weſt ſhoare lyeth moſt ſoutheaſt ſomewhat ſoutherly.

A ſouth

A ſouth and north moon maketh the higheſt water upon the Jade, and it floweth with an ordinary tyde 2 fathom and an half up and downe.

The Weſer.

For to ſaile up the Weſer, come no nearer Wrangeroogh then ſeven fathom, being in ſeven fathom, then edge off from the ſhoare into 11 fathom, and you ſhall there finde the firſt buye at the comming into the Weſer, lying in ſeven fathom upon the taile of the *Red*-ſand, Menſer Church (that is a flat Church without a ſteeple in Vroukens land) is then ſouthſoutheaſt from you. Being thwart of the firſt buye, and that the weſt end of Wrangeroogh is ſouthſouthweſt from you, then you runne over the tayle of the Red-ſand in five fathom.

From the outtermoſt buy to the ſecond, third, fourth, & fifth, the courſe is due eaſt, which lye all in 7 fathom the ſouthſide (to wit the Red-ſand) neareſt each a poynt different from Menſer church, ſo that Menſer church lyeth from the ſecond ſouth and by eaſt, from the third ſouth, from the fourth ſouth and by weſt, and from the fifth ſouthſouthweſt. The fifth buy is called the buy upon the Head, for to know that from all the other buyes, there ſtandeth a ſtaffe upon it of a halfe fathom long, with a white knotte upon it. Over againſt the buye upon the Head lyeth a white buye on the white grounds. Betwixt all the foreſayd buyes you muſt reckon wel your tydes, the floud commeth out of the northweſt, and falleth alongſt over the Red-ſand, and the ebbe to the contrary. The right deep thwart of theſe foreſaid buyes, in the comming in is eleven fathom, but thwart of the buye upon the Head, five fathom at low water.

Right before the Weſer lyeth the Middle-plate, the Eaſtermoſt of the Inner-ſide beginneth right to the northwards of the buye upon the Head by the white grounds, and lyeth alongſt the reach of the third buye, to reckon from without, and is on both ſides flat for to ſounde about. On the weſt ſide of the foreſayd plate lyeth a white buy about from Menſer Church, which you muſt leave in comming in on the larboard-ſide.

Middle Plate.

For to ſail from the buye upon the Head, out again to the eaſtwards of this plate unto the Elve. Then ſound it out about the white grounds, in 4 or 5 fathom, untill you be out in the ſea.

For to ſayle further up into the Weſer, the courſe from the buye upon the Head unto the ſixth buye is ſoutheaſt & northweſt. Menſer Church ſhall then lie from you ſouthweſt and by ſouth, the Weſer is thwart of it about 20 fathom deep. *From* the ſixth buye to the ſeventh, that is, the buye upon the Cours, or the Wapperbuye, or the ſouthweſt buye, becauſe Menſer-Church lyeth ſouthweſt off from it, the courſe is ſoutheaſt. The Jade buy lyeth about ſouth, or ſouth and by weſt from this buye. *From* the buye upon the Cours unto the Mellem buye the courſe is yet ſoutheaſt, which you might ſail within at unawares in ſixe fathom. Menſer Church lyeth off from it ſouthweſt and by weſt. *From* the Mellem buye to the buye upon Bollenziele the courſe is ſoutheaſt ſomewhat eaſterlye, you muſt reckon your tides there verie well, becauſe the floude falleth exceeding hard into the weſt ſhoare. Langworder church lyeth right ſouth and by eaſt from that buye upon Bollenziele, over againſt it upon the point of the black grounds lyeth a white buye, come no nearer to it at half floud then four fathome and an half, you might unawares ſail within that point (in ſayling in) in four fathom. *From* the buye, upon Bollenziele to the beakon upon Bollenziele the courſe is ſouthſoutheaſt, or ſoutheaſt and by ſouth. Langworder Church lyeth about ſouth from that beakon, you muſt leave it on the ſtarboard ſide, comming in within that beakon upon Bollenziele is a good roade for a weſterly winde. From the beakons upon Bollenziele to the firſt buye upon the flat, the courſe is ſoutheaſt till you come ſomewhat beneath the beakond, and then alongſt eaſtſoutheaſt. The marks o the firſt buye upon the Flat is, when you can ſee through the belholes of Langworder ſteeple, then you are thwart of the firſt buye, Langworder Church is them from you ſomewhat more ſoutherly then ſouthſouthweſt. From the firſt buye upon the Flat to the ſecond, the courſe is eaſtſoutheaſt. Betwixt theſe two buyes ſtande five beakons on the larboard ſide, upon the black grounds. From the ſecond buye upon the flatt to the Meyland, the courſe is ſoutheaſt and by ſouth. Being come thwart of Wadnis or the Meyland, ſayl then cloſe along by the green ſhoare, untill you come within Blixem, there is the roade for great ſhips that are bound to ſea.

uye upon Bollenziele.

Like as upon the Jade, ſo alſo upon the Weſer a ſouth and north moon maketh the higheſt water, it floweth there alſo 2 fathom and a half up and downe.

To the eaſtwards of the Weſer lye the ſouth grounds of the Elve, there go in 2 faire deep Balghs or Creeks of 10, 12, & 13 fathom. The Til, ealled alſo Broadbalgh, is the weſternmoſt, and lyeth ſo far to the weſtwards, that men can but even ſee the New-worke from thence. South grounds

If it ſhould happen that comming to the eaſtwards of the Weſer, you ſhould be beſer upon the ſouther grounds, being at leſt ſhoare, & be in danger, then ſaile to the ſouth grounds in 4, or 5, and 6 fathom, but not much nearer alſo, for they are ſomewhat ſteepe. When you (running ſo along by theſe grounds upon the ſame courſe) ſhall get 8, 9, yea, 10 or 12 fathom ſoft ground, then that is certainly of the Broadbalgh or Weſter Till, take then the ſounding of which ſide that you will, and ſound it about by the grounds in 4 or 5 fathom, and you ſhall finde amongſt the ſands ſmooth water, and good roade, and may lye ſheltered for all winds. The weſter Till lyeth in firſt eaſtſoutheaſt, alongſt by the north ſhoare it is deepeſt, on the ſouth ſhoare you cannot ſail within any tailes in ſailing out, but you may in ſailing in: when you come ſomewhat further in, lyeth up more to the ſouthwards: there are divers Balgs or channells, where men may ſaile trough that are acquainted. Weſter Till.

The Eaſter Till or Broadbalgh lyeth betwixt the Weſter Till and the Hondtbalgh, which runneth in ſeven fathom into the eaſtermoſt poynt, (or the old Schorhorn) that is a tayle which lyeth off a good wayes, and which you might at unawares ſail within in ſeven fathom comming from the weſtward. This Till lyeth in alſo (like as the other) firſt eaſtſoutheaſt, but a little further in more eaſterly. Here alſo you may take the ſounding of which ſide or ſhoare that you will. Eaſter Till.

Being com within, you ſhall get ſmooth water of the ſands for all winds. In this channell is not leſſe then 7 fathom water.

The Hondtbalgh lyeth right into the weſtwards of the Steep-buye or Schornhorn. If you will goe in there with ſmall ſhipps for to ſayle over the Wadt into the Weſer, then goe (when you have the Steepe buye) in ſouthſoutheaſt. The Hondtbalgh is without indifferent wide, keepe that courſe, untill you come thwart of the beakons, which you muſt leave on the ſtarboard ſide, you may well ſound in about the off-ſide of the Schor-horne, but not the weſt ſide, by it lye plates which you might ſaile foule of in 9 fathom, in comming in, but on the Schor-horne you cannot doe amiſſe. Hondtbalgh.

Holy-land.

The Iſland Hoyland, and the outermoſt buye in the Weſer, lye one from the other, ſouth ſomewhat weſterly, and north ſomewhat eaſterly. When it is cleare and good ſight, you may ſee Holyland, when you lye in the Weſer, by the buye upon the head. Holyland and Bornriffe lye one from the other ſouthweſt and by weſt,

and northeaſt and by eaſt according to the common opinion, two and thirty leagues. When you come from the weſtwards and begin to get Holy-land in ſight, it ſheweth it ſelfe with a high reddiſh ſteep point, which is flat above. For to anchor or make roade under Holy land, comming from the weſtwards, then runne to that land in tenne or twelve fathom. When you ſaile towards the ſouth point, and come ſomewhat near the land, you ſhall eſpie a rock, like unto a ſmall tower, cloſe by the high land, called the Monck, which is almoſt ſo high as the high land. About ſouthſoutheaſt an Engliſh mile, or a little more from that rock under water. If you keepe your ſelf in eight and nine fathom, then you run without this rock, and cannot take any hurt of it. When the Monck is covered of the other land, then you are thwart of this ſuncken rock. When the foreſayd Monck commeth a handſpikes length, paſt or without the other land, there is the road, & good anchoring in ten or eleven fathom; the ground is there faire and cleane, except it be of wracks of loſt ſhipps, or loſt anchors, which are there manie. Lying there in nine, tenne or eleven fathom, you have ſhelter for a weſtſouthweſt, northweſt and north windes. From the point where the Monck ſtandeth by, ſhooteth off a little riffe from the ſhoare, which men may ſound in 3 fathom, you may alſo runne in 5 fathom from the ſhoare, and ſaile cleare of the foreſayd ſuncken rock, to wit, through betwixt the ſuncken Rock, and the little riffe: but if you runne into deeper water, to wit, in 7 fathom, you ſhall runne right upon the ſuncken Rock. In 8 or 9 fathom you doe runne about without the ſuncken Rock.

Monk.

Rock under Water.

From the north ſide of Holy-land lyeth off a filthy *Riffe*, almoſt a league into ſea, ſo that you cannot come nearer the whole north ſide, then in nine or tenne fathom. If you will goe about to the northwards of Holy-land, being come ſo farre that the eaſt end of Holy-land come to be ſouth and ſouth and by eaſt from you, ſayle then freely unto the Scholvers point, that is a flatt point, which you may ſound in five, ſix, and ſeven fathom. If ſo be that you will runne in eight fathom off from it, you ſhall runne above two great leagues from the ſhoare. The right fareway betwixt the Hever and Holy-land is not more then nine or tenne fathom deepe. When you come about the point to the roade, and that Scholvers point lye northeaſt, and the Rock ſouthweſt from you, there is good lying in five fathom.

Scholvers point.

South haven.

Scholvers point is the point where the South Haven lyeth within, which lyeth from the high land about eaſt into ſea. From the outermoſt end of Scholvers poynt lyeth a banck of three fathom, unto the poynt where the Monck alſoo ſtandeth, within it is very good lying for ſhips of little draught, that is called the ſouth Haven of Holy-land. A ſouthſouthweſt and northnortheaſt moone maketh there the higheſt water.

Of the Elve.

The Roade of Holy-land, and the outermoſt buye of the Elve (called the Schortunne or the Steep-buye) lye right ſoutheaſt and by eaſt and northweſt and by weſt 8 leagues aſunder, which lyeth right to the northwards of the Schor-horn, that is the outermoſt poynt of the New-workes ground, on the ſouth ſide of the Elve, the right deepe of the Elve runneth in alongſt to the northwardes of it. On the north ſide of the Elve lye the north ground, which lye ſomewhat flat far off to ſeawardes upon the northweſt ſide. The ſouth end of the north-grounds, called Voghelſand, runneth from the foreſayd buye a good wayes weſt and by north into ſea, with a narrow tayle of perfect hard ſand, about a halfe league broad, which waxeth by little and little the farther from the ſhoare the deeper. Three leagues from the foreſaide buye, there is upon it eleven fathom water, when you ſaile on north from the ſteep-buye, you runne over it in three fathom, or three fathom and a halfe, but it doth ſoone deepe againe in five, ſeven, eight and tenne fathom, ſoft ground, that is in the Creeke of the North Elve. To the ſouthwardes of that a foreſayd Vogelſand, in the right fareway of the Elve (for him that commeth from the weſtwardes) it is alſo ſomewhat ſoft ground, and fourteene and thirteene fathom deepe, to the ſouthwardes of it, towards the ſouther or Steepe grounds, the ground is againe very hard, and the grounds very ſteep, you may not come nearer them (eſpecially by night or darke weather) then in eleven or twelve fathom, if you come nearer to them, you might ſayle foule of the weſter Till, or Souther-Broad-Balgh, which runneth up to the ſouthwards into the grounds to nothing.

North Elve.

Mirdle of Vogelſand.

When you come from the weſtwards, and ſaile to the Elve, you ſhall finde betwixt Holyland and the Weſer, and thereabouts ſomewhat to the eaſtwards, depth of twenty fathom, untill that you come well halfe wayes to Holyland, toward the Steenebuye, then it doth begin to ſhoale from eighteene to ſixteene and fourteene fathom, cloſe by the Steep buye it is twelve fathom deep.

If you come by night alongſt by the ſteepe or ſouther-grounds, with a ſoutherly winde in twelve or thirteene fathom, and goe on eaſt and by north, you ſhall at laſt meet with the ſhoaling of the New-workes-grounds, right to the northwards of the Hondt-balgh in eight and ſeven fathom, there you muſt then let fall your anchor, for to ſtay for the day, and you ſhall finde your ſelf not farre from the buye. With northerly windes you muſt anchor further from the ſouth ſhoare in the foreſayd ſhoaling in eleven or twelve fathom.

To the northwards of the foreſayd narrow tayle, or ſhoaling, which lyeth off from Vogelſand, runneth in a great bight or Slenck into the norther grounds, called the Norther Elve, it is in the going in ſomewhat within ſo broad that you may there in turne to winde-wardes, but within it runneth narrow and ſharp too; and at laſt to nothing, (ending allmoſt againſt the whitebuye, which lyeth upon the Elve, upon the tayle of the New-grounds) it is going in more then halfe wayes thirteen and twelve fathom deepe, and ſoft ground, very much like the right Elve. It happeneth oftentimes by darke wether that the ſhippers (thinking that they are entred into the right Elve) runne in there, ſometimes with danger, eſpecially with weſt northweſt windes, for they muſt come out there back againe. When you ſayl off from Holyland on eaſtſoutheaſt, you ſhall have depth of twelve or thirteene fathom, being a league off from it, that you leeſe the white Cliffe out of your ſight, then you ſhall get one eve depth of thirteene fathom, and ſoft ground, all alongſt untill you come within the foreſayd north Elve. When you ſhall perceive that you are entred in there, you may (when the New-worke is more ſoutherly then ſoutheaſt and by ſouth from you) run alongſt over the taile of Vogelſand in five fathom, and ſo come againſt the Steep-buye upon the right Elve.

North Elve.

For to ſet ſayle by night from the road of Holyland, the courſe is ſoutheaſt and by eaſt, then you ſhall run over the foreſayd tayle of Vogelſand in ſeven and eight fathom, and ſomewhat hard ſandy ground. If you then run a little more ſoutherly, you ſhall get againe twelve and thirteene fathom and ſomewhat ſoft ground, that is the right deep or channell of the Elve, betwixt Vogelſand and the ſteep grounds. If you runne then more ſoutherly, you ſhall get againe ſomewhat hard ground of the ſouther grounds, which are (as hath beene here before ſayd) very ſteep and hard, when you come neare them in twelve or eleven fathom, you muſt edge off againe from them unto twelve or thirteene fathom, and alongſt by them towards the ſteepe-buye, unto the foreſayd ſhoaling of the New-workes grounds, and there ſtay for the day light.

When

When you come by day from Holy-land or from the weſtwards, and that you get New-worke in ſight of you bring that and the Cape on in the other, and ſayle ſo right in with them, then you ſhall finde the ſteepe-buye, which lyeth (as hath beene already ſayd) towards the ſouth land on the ſide of the Schor-horne the outtermoſt poynt of the New-grounds in ten or eleven fathom. From the *Steep*-buye to the Kool-buye, that is, the ſecond buye, the courſe is due eaſt, which lyeth in eight fathom. Upon the New-work ſtand three country mens houſes, the middlemoſt of them, and the ſteeple of the New-worke come one in the other when you come to the ſecond buye. The third buy lyeth in ſix fathom, from the Kool-buye eaſt and by north ſomewhat eaſterly, but neareſt eaſt and by north. The fourth lyeth in five fathom from the third, eaſt and by north. Betwixt theſe buyes a little within the third, run a deepe Creeke eaſtſoutheaſt into the New-workes-grounds, called the Kinder-balgh, which is wide at the entring in, and at halfe flood well nine fathom deepe; but runneth at length altogether drye to nothing. He that commeth runningh alongſt by the ſouth-grounds, might lightly get in there, therefore the third buye lyeth a little further off from the ſouth ſhoare, becauſe men ſhould avoyd that Creeke. Betwixt the third and fourth buy on the north ſide of the deep lyeth a white buye in three fathom, upon the tayle of the New-ground, which men might ſayle within, when they come inwards, that you muſt leave on larboard ſide, and all the blacke buyes on the ſtarboard ſide.

The foreſayd white buye and the New-worke lye northnortheaſt and ſouthſouthweſt one from the other, to the eaſtwards of it the north ſide is very ſteepe. The fifth buye lyeth in 3 fathom and a halfe, or 4 fathom, and lyeth from the fourth full eaſt.

The ſixth buye, that is the poynt buy, lyeth in ſix fathom from the fourth and fifth due eaſt. In the right deep to the northwards of theſe foreſayd black buyes from the Kool-buy to the point buye in the right fare-way, it is all alongſt ſix and ſeven fathom deep. From the poynt buye to the buye in the Roſſe, the courſe is ſoutheaſt which lyeth in ſeven or eight fathom, when the Ros beakon commeth to the little ſteeple of Gron or Groen, then you are thwart of this buye. Halfe wayes betwixt the poynt buye, and the buye in the *Ro*ſſe, lyeth yet another buye on the ſouth ſide, which is there betwixt them both exceeding ſteepe and needle too. *Right* eaſt ſoutheaſt from the poynt buye over againſt the buye in the Roſſe, ſomewhat further inwards, lyeth a white buye upon the tayle of *Ro*maerl plate, which men might at unawares ſayle within, in foure or five fathom when they ſaile upwards. When the little ſharpe ſteeple of Woord commeth to the weſtwards of Olden-broek (that is a church with two ſpires upon one ſteeple) then they are ſouth from you, from thence inwards you may ſound Romaerl plate in ſix fathom without danger, otherwiſe it is on the off-ſide very ſteepe. *From* the *Ro*s beakon to Brunsbuttell ar five leagues, betwixt the buye in the Roſſe, and the buye upon Romaerl plate begins a ſand lying right in the middeſt alongſt the fareway about two leagues long, called Pilgroms-ſand, upon it is alongſt no more then two fathom water, or a little more, upon it lie three black buyes, and over againſt it on the north ſide, two white buyes, you muſt ſaile through betwixt them, alongſt to the northwards of that ſand, being paſt it, you ſhall come upon the flat. There lye yet two buyes which you muſt leave alſo on the ſtarboard ſide in ſayling up, before you come to Brunsbuttell. All the depths here before mentioned, are reckoned at halfe flood.

From Brunsbuttell to the buye upon Salſhorne, or Friburger-ſand, the Courſe is eaſt, and eaſt and by north alongſt by the north-land. From Salts-horne to the buy againſt the Steur eaſt and by ſouth, and eaſtſouth-eaſt, from the Steur to the buye upon Gringer-oorts-ſand ſoutheaſt, and ſoutheaſt and by eaſt, that lyeth againſt Bilenburg more then halfe wayes in the deepe. Betwixt this buye and the buye upon the Steur lyeth another buye in the fareway. From the buye of Gringer-oort to the buye upon Stader-ſand ſoutheaſt and by ſouth, and ſouthſoutheaſt. This buye you muſt leave on the ſtarboard ſide. From Stader-ſand to Willems-fliet, or the buye upon the Luye it is ſoutheaſt, and ſoutheaſt and by ſouth, and from thence to the buye upon Terloo eaſtſoutheaſt. From thence to the buye upon Hanneball, the courſe is eaſt and weſt. From Hanneball to the buye upon Blanckenes ſand eaſt and eaſt and by north; you muſt keepe that buye right with a great tree, and then runne alongſt by the north land untill you bee paſt the buye.

From Blanckeneſſe ſand unto the buye in the bight, the cours is eaſtſoutheaſt, & from thence unto the Eeckhout eaſt and by north, in the right channell it is there 3 or 4 fathom deepe, there lye the great ſhips for to lade & unlade.

The Eyder.

Six leagues to the northwards of the Elve lyeth the Eyder, with many ſhoales lying farre out without the land chiefely and moſt on the ſouth ſide, on the north ſide of the deepe alongſt by the land of Eyderſtee lyeth a long ſand called the Broad-back, or New-grounds, on the ſouth ſide lye Blavoort, the Iron Hendrick, the Hound and Heckſand. To the ſouthwars of Blavoort, & the Iron Hendrick, about a league to the ſouthwards of the mouth of the Eyder, goeth yet up a Deep in called the North pipe, where men may ſayle in, and come out againe by the Hound upon the Eyder. In this Eyder lye on the ſouth ſide of the Deepe ſeven black buyes, which you muſt leave all (in ſayling in) on the ſtarboard ſide, and on the north ſhoare, which you muſt leave on the larboard ſide. The outermoſt buye lyeth from the ſteepe buye right north, and from Holy-land eaſt or a little more northerly ſeven or eight leagues. When you fall with the land with that courſe you ſhall eſpye to the northwards of the Eyder, upon the land of Eyderſtee, a ſharpe ſteeple indifferent high, called Gardingen, bring that over or to the ſouth ſide of the little ſand-hils lying on the north ſide of the Eyder, called the Souther-Heads, they ſhall then ſtand from you northeaſt and by north, or a little more eaſterly, ſayle right in with them ſo, & you ſhall fall with the outermoſt buy, when that then the ſharpe ſteeple of Weſlinburen, ſtanding to the ſouthwards of the Eyder in the land of Ditmarſen commeth to be eaſt or a little more ſoutherly from you, then you have the length of the foreſayd buye, & then S. Peters Church upon the Eyderſtee to the weſtwards of Gardingen, not farre from the ſea ſide, ſhall ſtand from the northn. eaſt. Thus, or comming out of the ſouthweſt upon the foreſayd markes of Gardingen, and the Souther-heads, you ſhall run over the ſhoale of Blavoort, which men doe call alſo the taile of the Hound, lying off from Blavoort almoſt halfe waies to Holy-land. It is alſo by ſome called Blavoort, or comming from the northwards, bring the foreſayd ſteeple of Weſlinburen eaſt or a little more ſoutherly from you, & ſaile ſo right in untill that Gardingen commeth to the foreſaid ſoutherheads, or that S. Peters church bee northnortheaſt from you, in doing ſo you ſhall not miſſe alſo the outermoſt buy. From the outermoſt buy to the ſecond, third & fourth, it is al one courſe eaſtſoutheaſt, the ſecond lieth upon the ſhoaleſt of the channell at low water in 16 foot, the third in four fathom, and the fourth in 5 fathom.

Theſe three laſt lye alongſt the north ſide of Blavoort, on the ſouth ſide of the deepe. In ſayling in, you muſt leave them all on the ſtarboard ſide, and runne

alongst to the northwards of them. From the fourth to the fifth, that is, the buye upon the Hound, the course is east, which lyeth thwart of the Hound, on a point which lieth off from Heckesand, which in comming in, men might at unawares sayle within alongst to the southwards of the buye, therefore you must leave that also (as well as the former) on the starboard side, and sayle alongst to the northwards of it. Betwixt this foresayd buye upon the Hound, and the fourth, lyeth another buye upon the north side of the deep, upon the southermost poynt of the New-grounds, which you must leave on the larboard side, and runne about to the southwards of it. From the buye upon the Hound to the sixth, the course is north-northeast, and two fathom deep. *From* the sixth to the seventh and last buye northeast and by north, and the deepe alongst to the northwards of it three fathom. Being past the last buye, follow the beakons, which stand alongst on the north shoare, untill you come to Hulck, runne close alongst to the southwards or to the eastwards of them, for to avoyd a tayle of sand, which commeth off from the east shoare, which men might unawares sayle within into a Dead-creeke. From the Hulck to Schulperzile, the course is east southeast. In that reach, the beakons stand on the south side upon the Ballast-plate, and you must run alongst to the northwards by them, leaving them on the larboard side. From Schulperzile to Tonningen the course is northnortheast. Before Tonningen the Eyder is at the shoalest, and at low water no deeper then one fathom and a halfe. From thence further in towards the New-town called Frederick-stadt, there is depth enough.

The depths here before mentioned are all to bee understood at low water. *From* Tonningen towards Wollersum, the Eyder lyeth along northeast and by east. *From* Wollersum towards Harebleck northnorthwest. *From* Harebleck towards *Reymers*-bode northeast. From Reymers-bode towards Nyenzyle eastsoutheast. From Nyenzyle to Nyen-veere south.

Betwixt the fourth buye upon the Eyder and the fifth, that is, the buye upon the Hound, over against the buye upon the southermost poynt of the New-gronds, stand two beakons a little to the southwards of the foresayd two buyes, the westermost upon the east point of the Blavoort, or the Iron Hendrick, and the easternmost upon the taile of the Hound. Betwixt these two beakons goeth in through a deepe southeast or southeast and by east, where you may sayle through alongst by the beakons upon the Iron Hendrick (which you must leave then on the starboard side) untill you come into the end of the North-pipe, which lyeth from thence about west into sea. You may sound in at the North-pipe, comming in out of the sea by the south shoare in 3 and 4 fathom, until you come to the foresayd beakons, & then about by them northwest, or somewhat more westerly up unto the Eyder, or else you may runne further alongst by the foresayd south shoare, untill you come about the beakon upon Hoedmeersand, and then fort betwixt the Island Bulheads and Buysen alongst by the Beakons upon Hoedmeersand, with many poynts and bights on to the southwards, and come out at last upon the Old Elve, about northeast from the New-worck against the New-grounds, which is not well to be sayled, but of those that are there very well acquainted.

Alongst by the North shoare of the Eyder, close to the southwards of the little sand-hills, the southerheads, runneth in yet a Land-deepe, east and east and by north in, & commeth out againe upon the Eyder by the Hulck, that serves but onely for small ships, there remaineth at low water but five foot.

Of the Tydes and Courses of the streames.

Before the Scholbalgh, the Lauwers and the *Schille*, & before the Western-Eems a southeast and northwest Moone maketh high water.

Before Embden and Delfzyle a north or north and by east and a south or south and by west Moone.

In the Eastern-Eems & Burckumbalgh a southsoutheast and northnorthwest Moone.

Before the Channels betwixt the Eastern-Eems & the Weser, a south & south & by east, & a north & north & by west Moone.

In the fareway betwixt the Flye & the Elve, the foreflood commeth out of the north sea, & turneth about by little and little with the sunne, falling the halfe tyde east-northeast alongst the shoare, & the ebbe westsouthwest.

Before the Weser and Elve, and also in the Eyder a south and nord Moone maketh high water. The flood commeth there out of the northwest, & the ebbe out of the southeast, and fall very strong over the grounds that lye out there.

Under Holy-land a northnortheast & southsouthwest Moone maketh full sea.

Of the Depths about these places, and in what depths men may see the land.

Schiermonickoogh men may see in 12 & 13 fathom 4 great leagues without the land.

Rottum & Borckum men may see in 14 & 15 fathom.

Thwart of Borckum the ground is grosse red sand, mingled with some black.

Juyst, men may see in 13 and 14 fathom, 3 leagues without the land it is 12 fathom deep.

Buys and Norderny men may see from the Poop in 12 & 13 fathom.

Baltrum Langeroogh & Wrangeroogh, men may see it in 14 and 15 fathom.

Thwart of Botjadigerland, Reidingerland & Ditmarsen, the grounds lye so farre without the land, that you cannot see the coasts, except you clim be up into the top.

About Holyland it is deep 7, 8, and 9 fathom, to wit, on the inner side, but without on the west side 15, 16, 18, & 19 fathom, in such depth you may see the land of Holy-land from the westwards.

Courses and Distances.

The coast alongst these Islands lyeth eastnortheast and westsouthwest.

From Borckum-Riffe to Wrangeroogh east northeast 17 leagues.

From the Eastern-Eems or Juyst-riffe to the Steep-buye or Schortunne eastnortheast 20 leagues.

From the Eems to Flambrough-head west somewhat northerly 77 leagues.

From the Eems to Bovenbergen north & by e. 57 leag.

From the Eems to Holy-land the course is northeast and northeast and by east 21 or 22 leagues.

From Wrangeroogh to the New-worke eastnortheast 8 leagues.

From the outermost buye upon the Elve to the Eyder, north 7 or 8 leagues.

From Langeroogh to Holy-land, northnortheast tenne leagues.

Holyland & the outermost buye in the Weser lye north somewhat easterly, and south somewhat westerly. The buy upon the Head in the Weser, and Holyland lye north and south a sunder. 8 leagues.

The steep-buye on the Neu-work & Holyland lye southeast and by east, and northwest and by west a sunder 8 leagues.

The outtermost Buy in the Eyder & Holy-land, lie east somewhat northerly, and west somewhat southerly asunder 7 or 8 leagues.

From Holyland to the Homls before Jarmouth, the course is westsouthw. or somewhat more westerly 72 leag.

From Holyland to Scarbrough & *Flambrough* head, west or somewhat more southerly 88 leagues.

From Holyland to Timmouth, or Newcastle, west somewhat

Lesou
Koopergrond
12 voet diep
Dwaelgronden
Schagen
Clarenhoeck
Graftholm
Holmes
Dee
Zeeburg
Hagerbg
Laedou
Swettering
Stevens hoeft
Orunburg
Ranesont
Grimste
Hals
Marthals
Robbekmuyt
Werlum
Kettorp
Oosterhoeck
Orum
Holmen
Immebuy
Westeryl
Boeyenbergen
Troyenmund
Swantsburgh
Riscopen
Mariacker
Randersen
Kal
Aerhus
Kenebarg
Numet
Riscopper diep
Blauwe berch
Schilling
Wijfkijck
De Horn
Lutsche
Rif
Gadde Lag
Ebeltoft

ZEELANDT

LALAND

FVEN

Werdenborgh

Nestvelt

Rodenis

Kallenborgh

Schoutsoer

Cgsnes

Spro

Defrisel

Romps

Knutshoofd

Stons

Kenstorpeng

Langeland

Nyborg

Oslorp

Gudins

Cartemunde

Swynborg

Oldorp

Bowens

Odensee

Wobory

Sonderborg

Orgard

Ascens

Karlgard

Toren

De Roen

Alsen

Reins hooft

Sonderborg

Norborg

Nubel

Ruclooster

Aerhusen

Morsens

Samso

Ebeltnd

Kyholm

Swantgrunt

Rypen

Phanø

Hadderslen

Apenrade

Flensborgh

Lutke Tonderen

Tonderen

Butloot

Husum

Fartoft

Sild

Strant

Ear

Groote Rif

Rif

Syro

Wero

Hasselun

Koopergrond
12 vaet diep

Rif

Syrø

Swistering

Stevens hooft

Grimste

Grootebaks

Were

Kyholm

Samso

Ebeltoft

Randersen

Mariacker

Kal

Aerhusen

Wieder Sont

Morsens

Rodens

Kallenborgh

Z E E L A

Romps

Knusthooft

Nyborg

Cartemunde

F V I

Bowens

Odensee

Orgard

N E N

Kerfgard

Wobory

Sonderborg

Ascens

Kaddersleu

Rincop

Kenbing

Rincoper diep

Blaavs bergh

Schilling

Rypen

Phanø

Lenke Tonderen

Hoyer

Tonde

Pascaerte
Vande West en Oost-zyde van
IVTLANDT,
Als mede
De Belt
Mitgaders
De Zee-cust van Holster, Mekelenborg, en de Eylanden van Lalandt, Falster, ende Meun.

Duytsche mylen 15 in een graet

Spaensche mylen 17½ in een graet

Eng. en Fra. mylen 20 in een graet

6



what more northerly 106 leagues.
From Holyland to Leith in Scotland, weſt & by north & ſomewhat more northerly 120 leagues.
From Holy-land to Boecknes northweſt and by weſt 128 leagues.
From Holy-land to Hanghlip in Hitland northweſt 169 leagues.
From Holyland to Bovenbergen, n. & by w. 43 leagues.
From Holyland to the Horne, or Dodebergh, north 25 leagues.
From Holyland to Knuytsdeep, or Ryperdeep, the courſe is north and north and by eaſt 20 leagues.
From Holyland to the Deepe of Silt, or Liſt, north & by eaſt 17 leagues.
From Holyland to Ameren, or Small-deep, the courſe is northnortheaſt ſomewhat eaſterly 10 leagues.
From Holyland to the outermoſt buye in the Hever, northeaſt 8 leagues.
When you lye by the outermoſt buy in the Hever, in cleare weather, you may ſee Holyland.

How theſe Lands doe shew themſelves at Sea.



Thus ſheweth Schiermonckoogh, being 2 leagues thwart off from you.



Borckum.

Thus ſheweth Borckum and Rottum, when you ſayle alongſt by them, being two leagues a ſeaboard the Land.



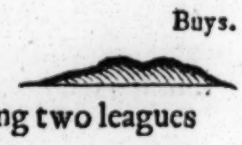
Rottum.



Thus ſheweth the Iſland Juyſt, being about 2 leagues off from you.



Norderny.



Buys.

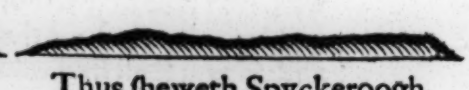
Thus ſheweth Iſland Buys, and Norderny, being two leagues twart off from you.



Thus riſeth Baltrum, when you are about two leagues a ſea board the land.



Langeroogh ſheweth it ſelfe thus, when you are about two leagues off from it.



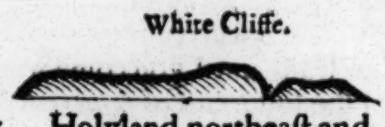
Thus ſheweth Spyckeroogh, when it is about two leag. from you.



Thus ſheweth Wrangeroogh when it is about two leagues twart off from you.



Holyland northeaſt & by eaſt 5 leagues from you, ſheweth it ſelfe thus.



White Cliffe.

Holyland northeaſt and by eaſt from you ſheweth thus.



Thus ſheweth the New-land or New-worke, when you are at the entring of the Elve.

The third Demonſtration,

Where in,

Are deciphered the Sea-Coaſts of the weſt and eaſt ſide of Jutland: together with the Belt untill you are paſt Laland and Langeland.

FRom the New-worke, or Steepe-Buy to the Hever, the courſe is north ten leagues, when you come about halfe wayes betwixt them both you ſhal meet with the foreſayd ſand or tayle of Blavoort in the depth of two or three fathom. In this fareway you muſt be very carefull of your tydes, that you come not upon the grounds, which lye far out a ſeaboard the Land, the foreflood falleth there very ſtrong thwart over the grounds towards the land, and the ebbe to the contrary.

For to ſayle from Holyland to the Hever, goe on northeaſt ſomewhat eaſterly, or according as the winde and tyde ſhall be, and runne towards the grounds, untill you come in ſix or ſeven fathom, and then you ſhall eſpye a ſteeple which is ſharpe, and indifferent high, called Piel-worme, bring that northeaſt & by north from you, a maſts length to the ſouthwards of the ſouthermoſt Cow-houſe, upon the little Iſland Nuball, keepe that ſo ſtanding, and ſayle towards it, and you ſhall ſo finde the outermoſt buy, from that to the ſecond buy, goe on northeaſt, & northeaſt and by eaſt; being come to it, Piel-worme ſteeple ſhall ſtand northnortheaſt from you. From the ſecond buy alongſt inwards, the courſe is northeaſt and by eaſt. Being come in ſo a good wayes, you ſhall finde two beakons on the ſtarboard ſide, upon a dry ſand, called the Quade, there over againſt commeth the north balgh in the right Hever.

From the firſt beakon to the ſecond & third, the courſe is eaſt and by north, ſayle all alongſt by the beakons, leaving them on the ſtarboard ſide. To the nortwards of them betwixt the firſt and third beakon, it is full of ſands and plates, where you might at unawares ſayle within. By the third beakon commeth the ſouther balgh into the Hever. From that third beakon to the two other beakons the courſe is northeaſt and by eaſt, being paſt that you ſhall come by the greene land on the ſtarboard ſide, there it is a ſquare deepe, large and broad channell, from thence you may ſayle alongſt amidſt the channell unto Hoeſem at the bridge, or anchor thereabouts every where, where you will.

Without in the Hever the north ſide is ſteepe, therefore keepe the ſouth ſide untill you come within the beakons, in the channell is at halfe floud two fathom and a halfe water, and without the channell it is very farre flat. Somewhat without the Hever lyeth alſo a banck, whereof men muſt bee carefull when they will ſayle in there. A ſouth and north Moone maketh there the higheſt water.

The ſouth balgh goeth into the ſouthwards of the foreſayd banck the Quade, in right with the little Iſland Utto, and alongſt to the northwards of it, it is from without a league and a halfe to ſayle to Utto. From Utto it lyeth in alongſt northeaſt and by north, and commeth out into the Hever by the third beakon.

The north balgh lyeth in to the northwards of the Hever about eaſt and by north, or weſt and by ſouth from Pielworme, right in with the foreſayd little Iſland Nuball which you muſt leave on the larboard ſide running in along by it, and ſo come into the Hever, againſt the foreſayd drye ſand, the Quade: you may alſo (comming in at the northbalgh) ſayle up to the northwards from the Iſland Nuball unto the end of Strand, till you come thwart of a flat Church, and anchor there behind the ſhoals, that is a deepe balgh or Creek.

Small deepe.

Three or foure leagues to the northwards of the Hever, lyeth the Small-deep. For to ſayle off from Holyland toward it, goe on northeaſt and by north, and runne to the grounds, about weſt and by north, from the Pielworme, the ſouth end of Ameren ſhall then bee north or thereabouts from you. Seek then to the ſouth grounds, and ſound about by them, and there you cannot doe amiſſe, it is flat riſing ground farre without the land. On the north ſide lye many ſands, ſhoals and poynts, that lye out, which men might (without good heed-taking) ſayle within: ſayle in therefore alongſt by the ſouth ſide north and by eaſt, northnortheaſt, and northeaſt and by north, and ſo you ſhall find one ſhoale or breach, leave that on the larboard ſide. If you leave that on the ſtarboard ſide, you ſhould runne into a dead Balgh or Creek, wherein is at the firſt at leaſt 7 fathom depth, buth runneth at laſt by little and little to nothing: you may alſo runne alongſt by that foreſayd ſhoale by your lead, until you come within it, comming then thwart of the ſouth end of Ameren, you might unawares ſayle within the ſouth grounds behinde a ſhare which ſhooteth off from the grounds of Vooren, therefore keepe the ſouth ſide untill that you come thwart of the Iſland Vooren.

The Red-deepe.

For to ſaile in at the Red or Silter-deepe, comming from the northwards, or out of the ſea, runne in ſight of the Iſland Ameren. About the middeſt of Ameren lyeth a white round hill, a little higher then the other Hommocks in a low plaine valley. Bring that northeaſt from you, and run in ſo right with it, untill you come within the riffe that ſhooteth off from the Voortrap, and commonly is called Ameren Borne, and ſo you cannot take any hurt of it, and then you ſhall have upon the poynt of the Riffe not leſſe then three fathom water, and within the ſame riffe eleven, twelve, or thirteene fathom. Saile ſo in untill that the north end of Ameren be north and by eaſt from you, and then run right with the north end of Ameren, untill you come within the dry ſand, and there you may anchor where you pleaſe, or ſayle ſo farre in as you will, and ſound it all alongſt by the Riffe.

Ameren-Borne.

The Strand of Ameren is a faire Strand without any tayles that men might ſayle within. When the foreſayd hill upon Ameren is eaſtnortheaſt from you, and ſayle ſo right with it, then you run too neare the foreſayd Riffe of Silt, the hill is then alſo in two parts, the northermoſt is then the ſmalleſt.

For to ſayle in at the Red-deepe, or Silterdeepe, comming off from Holyland, and that you have gotten ſight of the land, then bring the north end of Ameren north and by eaſt from you, untill that you be come in betwixt Ameren, and the Riffe of Silt, runne then in alongſt by the Strand of Ameren, untill you come about the north point of Ameren and ſo along to the eaſtwards, untill that Ameren lye ſouth and ſouthſouthweſt from you. You may not ſayle into this channell further to the eaſtwards, for then you come againſt the Iſland of Vooren, but you may ſayle to the northwards alongſt betwixt Vooren and Silt, till you come before Lit. In Silterdeepe is upon the ſhoaleſt three fathom water, being over it, there is againe eight, nine, tenne, and twelve fathom, there lye two riffes, or bad ſands, the one about weſtſouthweſt from Ameren dry above water, that is very farre flat, to wit, in three, foure, or five fathom, it is called of the Juthers the Borne, or Ameren-Borne, althongh that it be not faſt to Ameren, for the Red-deep goeth in betwixt them both. It is not alſo faſt unto the Voortraps, or that ſouth end of Silt, although it commenth ſhooting off from it, betwixt them goeth out into ſea a deepe of about a fathom and a halfe, where the fiſhermen doe dayly goe out through for to fiſh, eſpeally thoſe of the Iſland Vooren, this is the outermoſt ſand that lyeth on this coaſt. They that uſe this coaſt much; either for Rypen, or the quarters thereabous are very much afraid for this Ameren-Borne when they come off from Holyland, they finde this ſhoale about weſtſouthweſt from Ameren.

The other ſand ſhooting off from the ſouth end of Ameren, lying about ſouth, and ſouth and by weſt into the ſea alongſt the Land, that is alſo called by many, the Borne, or Ameren-Born. He that commeth off from Holyland, and is bound to the northwards, need not feere ſo much for the ſhoale, for it ſhooteth out moſt by the land.

The Haven of Liſt.

About eight leagues to the northwards of Silter-deep lyeth the Haven of Liſt, which runneth in by thee north end of the Iſland Silt. For to ſayle in there, comming from the ſouthwards, runne ſo long to the northwards in ſix or ſeven fathom, that you may ſee a little Iſland without the poynt (which lyeth within theſe outer Iſlands) upon which ſtandeth a houſe, called Jeurtmans houſe: when that houſe commeth a maſt lenght without the point of Liſt, then goe in eaſt and by ſouth, and eaſtſoutheaſt, keepe thoſe markes ſo ſtanding, untill that you bee within the poynt off Liſt, edge then up to the ſouthwards about the poynt, and anchor before the Vuchts houſe, there it is nine and ten fathom deep. At the entring of the channell leyth a plate or ſand, called Haef-ſand, that you ſhall leave on the larboard ſide, when you come in, it is on the off-ſide very flat, and good for to ſound when you come from the northwards. For to avoyd that when you come from the northwards, edge off ſo far from the ſhoare, that the red Cliffe come without the ſand-hills, or that you may ſee it plainely: Then you may well goe over Haefſand, with a ſhip that is not of a very great draught. Likewiſe when you come out at the channell of Liſt, and are bound to the northwards, ſayle ſo farre out that you may ſee the Cliffe, and then you may goe over the foreſayd ſand, which lyeth from the ſouth end of Rem a good wayes into ſea.

Haef ſand.

On the ſouth ſide of the channell of Liſt lye alſo two ſands or banks alongſt the ſhoare, not very farre without the ſtrand, the innermoſt or northermoſt is called Barling-ſand and the outermoſt Ruſt, or *R*uſting, that lieth to the ſouthwards almoſt thwart of the red Cliffe, betwixt theſe ſands, and the ſtrand of Silt goeth in the Land-deep. For to ſail in there comming from the ſouthwards, you muſt ſeek betimes to the ſtrand of Liſt about the red Cliffe, becauſe of the ruſt which lyeth off from the north end of Liſt a little without the ſtrand. When that you have the ſounding of he ſhoare, and are come ſomewhat within that red Cliff, there ſhall meet you a flat from the ſhoare, which you muſt ſomewhat avoyd, and then you may ſound very well: keep all alongſt the foot ſtrand, there you can take no hurt of it. From the Innerpoynt of Liſt ſhooteth off alſo a little riffe, where of you muſt take heed. When that you are come within the Innermoſt poynt of Liſt, then you may anchor where you pleaſe. If you will goe to Lutke Tonderen, then leave that ſand (which lyeth to the ſouthwards of Jureſand) on the ſtarboard ſide, and runne through betwixt them both. He that is bound to Hoeſem

Barling-ſand. Ruſt, or Ruſting.

Coer-ſand.

or

or Silt over the Wadt, muſt leave that ſand on the larboard ſide. Upon Vooren ſtand two or three trees, theſe you muſt keepe over the weſtermoſt church or ſteeple, and run ſo alongſt unto Vooren.

Betwixt the Ruſt and Barling-ſand goeth a faire deep channell through, called the New deepe, right in alongſt to the ſouthwardes of Rock-ſand, that is a ſhoale which lyeth to ſeawards of Ruſt and Barling-ſand. For to ſayle in at that New-deepe, bring the white cliffe upon Silt eaſt, and eaſt and by north from you and run in ſo right with it, and you ſhal fall right in the New-deep betwixt theſe two banckes, leaving Rockſand or the Maber on the larboard ſide of you, run in ſo alongſt by Ruſt, but come alſo no nearer to it then in foure fathom, untill that you come into the Land-deep, but comming againſt the ſhoare, and getting ſhoaling of the ſtrand, run in alongſt by the foot-ſtrand on inwardes, as is rehearſed in the deſcription of the Land-deep.

Betwixt Haef-ſand, or Haes-ſandt, an the Iſland of *Rem* goeth in yet a little Land-deep of about a fathom & a halfe water. The Iſland *Rem* is three leagues long, and very flat on the off-ſide, ſo that you ſhal ſcarce ſee that land in 6 or 7 fathom.

About eight or nine leagues a ſeaboard of the Iſland Silt lyeth another banck along the ſhoare of eight or 9 fathom, and is about two leagues long, about ſo long as the Iſland is. Betwixt this Bancke and the Iſland it is thirteene fathom deepe, being in nine fathom a ſeaboard the Iſland Silt, then lyeth Holylandt a bout ſouth from you.

Knuyts-deep, or Riper-deep.

From the channell of Liſt to Knuyts or Ryper-deep the courſe is north and ſouth about ſeven leagues, but Ryper-deepe & Holyland lye north ſomewhat weſterly, and ſouth ſomewhat eaſterly one from the other, for to ſayle into Knuyts or *R*yper-deep comming from the ſouthwards, run about by the flat of Rem and Manu towards the ſouth end of Phanu, called ſouther head, or Souther-heigh, and ſo you ſhall ſee two Capes upon a drye ſand, ſomewhat to the ſouthwards Southerhead, bring thoſe Capes a little through one anoter, to wit the innermoſt or longſt a little or a handſpikes length to the northwards of the ſhorteſt or outermoſt, and then they ſhall ſtand eaſtnortheaſt from you, keep them ſo ſtanding, and ſayle right in with them, and ſo you ſhal finde the outermoſt buye, lying on the north ſhoare in foure fathom in the channell, called Old Ruper-deepe, leave that buye on the larboard ſide, and then goe inwards eaſt and by north, eaſt, and eaſt and by ſouth unto the ſecond buye, you muſt runne alſo about to the ſouthwards of it, for thwart of it commeth a ſhoale ſhooting off from the north ſhoare, from the outermoſt Cape towardes the ſecond buye, which you muſt avoyd.

Or keepe the ſounding of the ſouth ſhoare called Coerſand, and run by your lead firſt eaſt and by north, then eaſt, and at laſt eaſt and by ſouth in by it, you ſhal finde there upon the ſhoaleſt not leſſe then ten foot at low water and common tyde; there within it is again 6, 7, and 8 fathom deepe. Being paſt the Capes, then luffe up to the northwards, about the ſand where the Capes ſtand upon, and anchor there where you pleaſe, there it is wide and broad, and alſo deep and ſteepe, ſo that there you can take no hurt. The Ryper ſhips that are bound out, doe lye there for to ſtay for a winde. Behinde the Iſland Manu it is 6 and 7 fathom deepe, there alſo men may ride, from thence you may go up the deep to Rypen, but not up alongſt to Rype with great ſhips, cloſe to Rypen the deep endeth, ſo that there is a ſhoale neck betwixt both, where there is no more then 6 foot depth. With ſmall ſhips you may alſo ſaile about behind Rem towards Iurſand, there is at low water about 7 foot water.

Comming from the northwards for to ſayl into Ryper-deepe, you ſhall alſo runne on to the ſouth end of Phanu, untill that you ſhall eſpye the foreſayd Capes, and goe then further as is above taught. This channell is not the beſt channell in foule weather, fort it is narrow and farre off ſhoale wihout it: but when you ſhall bee entred into it, you may eaſily ſee both ſides break, if it blow any thing hard.

A ſoutſouthweſt and northnortheaſt moon maketh here the higheſt water.

The Growe-deepe.

About northeaſt, or northeaſt and by north from the north end of Phanu lyeth a little Hill, called Luysbergh: a little to the northwards of it lyeth a long plaine ſand-hill, called Langeleg: from thence lyeth the land towards Zuyder-zyt weſtnorthweſt and eaſtſoutheaſt.

Betwixt the north point of Phanu & Langeleg goeth in that Growe-deep. For to ſayl in there when you come from the ſouthwars, run alongſt the Iſland Phanu, and about by the north end of it (which is farre flat.) When as that you get deeper water, you ſhall ſee three or four hommocks about northeaſt from you, upon the high land with a little flat ſteeple, called Holm, or Bruynum. Bring that little Church a cables length to the northwards of the Hommocks, goe in then northeaſt, and keep the ſouts ſhoare, untill you come within that dry-ſand, which ſhooteth off from Phanu, called Smeurſand, you may run to that upon your ſight without doing a miſſe, but leave that on the ſtarboard ſide when you come in. The ſhoares are thereabouts both of them very ſteepe, as well Wiſdike, (that is the Plate which lyeth in the channell) as alſo Smeurſand, but without the ſhoares are flat. When you are paſt the poynt of Smeurſand, edge then over to Wiſdike, and anchor there untill that you have the loweſt water, and then jou may ſayle to Hartingen, and go on forth to Wardt, or Woerdt; which lyeth eight or nine leagues within the land, the river is very crooked; upon the which here & there lyeth a Gentlemans houſe.

Lange-leg.

Smeur-ſand.

Wardt.

A ſouthſouthweſt and northnortheaſt moon maketh there the higheſt water, and there it floweth with a common tyde a bout a fathom up and down.

From Phanu to Schellingkroegh it is four leagues, betwixt them lyeth Zuyder-zyt a little river of eight or nine foot water. The land betwixt Langeleg and Zuyder-zyt is ragged land with ſand-hilles, and rough, being grown with ſpirie graſſe, or heath. If you ſhould fall with the land at Zuyder-zyt, and that you could not lead it into the channell, then chooſe the land of Langeleg, you may run to it without danger, keepe in two fathom and a halfe, and you cannot ſayle amiſſe of this Kroegh: for you may ſound this land all alongſt in two fathom and an halfe off from Langeleg untill you come within Schellingh-kroegh, but if you run in three fathom or three fathom and a halfe, you ſhall ſayle without the drieſand, and run about a ſeaboard of the forenamed Kroegh. Schellingh-kroegh lyeth in moſt northweſt, men lye there within ſheltred for all winds, Like as men doe lye at Coningſborough in the Kettell. If ſoo bee that you come from the northwards, and are bound into this Haven or Kroegh, you may run about by that drie ſand in three fathom, when you come by the innermoſt point of that drie ſand, there ſhooteth off a little tayle of ſand, but jou may ſee it well, and keepe jour ſelfe from it: when you come to the eaſt end of that ſand, luffe up about it, untill you come into that Kroegh, and anchor there in two fathom and a foot, it is there very wide, you may make there a good board, and turne it un to windwards. A ſouthſouthweſt and northnortheaſt moone maketh there the higheſt water, the farther you come to the northwards to Jutland, the leſſe tyde goeth, and the leſſe it floweth up and downe.

Schel-lingh-kroegh.

Zuyder zijt.

A the north end of the foreſayd drie ſand lyeth the Doo-

Doodenbergh. Doodenbergh, that is a ſhort hommock of a Sand-hill, which lyeth alone. When you are ſomewhat off from it, then it lyeth under the other land, that you cannot ſee it, when you come from the ſouthwards or the northwards you may ſee it. From the Doodenberg unto that ſouth end of the drieſand, it is all alongſt a faire ſtrand, and flat ground. For to ride under the drie ſand, you may ſound about it comming from the northwards, and get ſmooth water for a northweſt wind, and alſo for weſterly windes.

A little to the northwards of the Doodenbergh lyeth the poynt called the Horne betwixt Zuyder-zyt and Weſter-zyt making there a Horn of the land: to the ſouthwards of it the Coaſt lyeth eaſtſoutheaſt and weſtnorthweſt towardes the Growe-deepe: to the northwards of it north, and ſouth towardes Weſter-zyt. Weſter-zyt is a village lying betwixt the Blawenbergh and the Horne.

About this poynt or Horne runneth off a long banck abous twelve leagues weſtſouthweſt into ſea: called Reefſhorne, or as ſome do name it Devillhorne, which lyeth at ſome places altogether drye, ſpecially ſeven or eight leagues from the ſhoare, where it is not deeper then two fathom and a halfe, or three fathom a foote leſſe. A ſhippe that ſayleth upon it, men can but even ſee it from the land it is at the deepeſt by the land, to witt four fathom lacking a foot. He that commeth there from the northwards with a ſhip of a great draught muſt take verie good heed, for it is upon the northweſt ſide off ſteepe, that men ſhall have one caſte two and twenty, the next caſt ſifteene, and the third caſt no more then three fathom.

Reefshorne.

When you fall with the land with Weſter-zyt or to the northwards of Reefſhorne, you may ſound alongſt by the ſhoare in ſix or ſeven fathom, untill you come neare the foreſayd Horne: you ſhall then alſo finde another ſhoale Riffe, that runneth off from the land, called the Owle, which is alſo very ſteepe on the north ſide: from the northwards you may not come nearer it, then in ſeven fathom. A little to the ſouthwardes of it beginneth Reefſhorne to runne off from the ſhoare, it is there a narrowe banck, you ſhall not finde there leſſe then three fathom, or three fathom lacking a foot water, at two or three caſt, according as it ſhall blowe hard or ſoft, and that you ſhall make your waye, and then you ſhall get preſently againe five fathom, and ſound it about by that ſhoale ſand, whether you deſire to bee.

The Owl.

According to the opinion of ſome, Doggers-ſand beginneth from this banck. When men ſette ſayle early in the morning out of Rinkopper deepe, with a ſouthweſt waye, and a good northeaſt winde, then they are about four of the clock in the afternoone yet in nine fathom, whereby it ſould appeare, that Doggers Sand ſhould have his beginning at this banck.

For to know the land hereabouts: About four leagues to the northwardes of the foreſayd Horne lyeth a high hill a little from the ſtrand, called the Blawenbergh, going playn downe on both ſides, which is ſomewhat blacker then the other land, being grown with ſpyrie graſſe, to the ſouthwards of this Blawenbergh lyeth that fiſhers village Weſter-zyt, betwixt that village and the Horne lyeth one Black hommock, and alſo a Gentlemans houſe, otherwiſe the land is altogether full of hommocks.

Rinkopper deepe.

Tho the northwars of the foreſayd Blawenbergh lye three or four lowe white Sand-hills, and by the hayen of Numen alſo twe great white Sand-hills cloſe one by the other. To the northwardes of theſe Sand-hills runneth in that Haven of Numen, the land lyeth betwixt the haven of Numen, and the Doodenbergh, moſt ſouth and north about 7 leagues, all alongſt a faire ſtrand: the beſt to bee knowne of this Coaſt, is the foreſayd Blawenberg and theſe two foreſayd white Sand-hills.

Rinkopperdeepe.

For to ſayle into Rinkopperdeep or the Haven of Numen runne alongſt by the land of Weſt-zyt, in ſix or ſeven fathom, untill that you come to the two foreſayd great white Sand-hilles, and then you ſhall ſee upon a low land two capes, upon each of them ſtandeth a barrell: Bring them one in the other, and then they ſhall ſtand north, or north and by eaſt from you, ſayle in right with them, and you ſhall finde a buye, excepit it be laide ſomewhere els. Right before the haven of Numen lieth a Sandplate, named Gladde-Jaep. For to ſaile into the ſouther channell, then leave that plate on the larboard ſide, and run in cloſe by the ſouth ſhoare or foot ſtrand (where the aforeſayd white Sandhilles doe lye upon) right with the Capes, and there you cannot doe amiſſe, but runne in boldly by it upon your lead that is the very ſureſt way of all to ſayl in alongſt by the ſtrand, when men are carefull of the lead.

Gladde-Jaep.

Being paſt Gladde-Jaep, runne then towards the north ſhoare, you may ſayle about by it ſo cloſe as you will, it is a lowe plaine poynt, altogether cleane and vere ſteepe. When you are come within this poynt, you may anchor whore you pleaſe. This channell lyeth in moſt north and north and by eaſt, untill you come within Gladde-Jaep, and then ſomewhat more eaſterly towards the foreſayd point. In this channell goeth an indifferent ſtrong tyde, becauſe there lyeth ſuch a great ſound within. It flowath there little up and downe, no more then two foot and a halfe, with a common tyde. A ſouthweſt and northeaſt Moone maketh there the higheſt water. Right to the northwardes of Gladde-Jaep runneth in another channell, but there is no more eight foot water.

Further within the Haven of Numen it is Pilots water, but ſhippes that are not of great draught may wel ſayle up, eſpecially at a low water. The deepe runneth alongſt by the ſtrand of Numis keeping alougſt by it, you cannot doe amiſſe: ſo ſoone as you goe off from it, you ſhall bee in danger to ſayle within the ſhoares or tayles, which lye off from the Wadt towardes the land of Numit, therefore runne cloſe along by the foreſayd ſtrand of Numit ſo long, until that the little Church with a flatt ſteeple (bee about eaſt from you againſt the high land of the Holme) come to the ſouth ſide of the high land: then you are within the thayles and ſands that lye out, leave then the ſtrande, and goe in northnortheaſt, and northeaſt and by north, untill that a round hommock come cloſe to the ſouthwardes, or right over a little blew Church upon the high land of the Holme. Goe then in alongſt northeaſt and by eaſt untill that the foreſayd little blew Church commeth over a Gentlemans houſe, beneath in the low land, cloſe to the water. Sayle then on north, and by little and little north and by eaſt, untill you come before Rinkoppen, it is there broade, large and wide, and the right deep two fathom and two foote.

Rinkoppen and the havens mouth of Numen lye four leagues a ſunder, one from the other.

To the northwardes of Rinkoppen goeth a little river into the land, upon which lye two little touwes, ſeven or eight leagues in the land, the one named Hoſtebro and the other Huyſbuy.

A halfe league to the ſouthwards of Boevenberghen goeth in yet another little haven inwardes out of the ſea, named Troſmone, there ſtand two maſtes, you muſt keepe them one in the other, and runne ſo into: there lyeth a little village within called Troſmonde. From thence you may ſayle over the Wadt to Rinkoppen.

This little haven is not to be reckoned for a Haven becauſe ſometimes it is caſt too, and ſometimes there may goe in and out againe Boates or Crayers and ſmall ſhippes.

From Rinkopper Deepe or the Haven of Numen to Boevenbergen the land lyeth moſt north and ſouth ten leagues,

leagues, there is all alongſt betwixt them both a faire ſtrand, with white ſand-hills, growne with ſpyrie graſſe.

When you ſayle alongſt by it, you may ſee the blew double land of Rinkoppen, (called the Holmes) alongſt over this land.

Betwixt Boevenberghen and the Reefhorne lye ſome banckes of ſeven, eight and nine fathom, and alſo ſome that are deeper.

Boevenbergh is a longh ſmooth hill, having in the middeſt a high round hommock or hill, and upon that hil ſtandeth a church with a ſteeple: when you come thwart to land with Boevenbergen, it ſheweth it ſelfe in three hilles, the middlemoſt is the higheſt, upon which ſtandeth the foreſayd church with a flat ſteeple: upon both ſides of that hill ſtand alſo other churches, but they are not ſo high: you may ſee the land in thirteene and fourteene fathom, the ground is groſſe red ſand with ſome little ſtones there in.

When Boevenbergen is eaſt northeaſt from you, it ſheweth it ſelf in a long hill, with ſome dale in the middeſt on the northſide, with a church, and alſo a church on the ſouth ſide, & alſo another hill to the northwards of it.

From Boevenbergen to the Holmes the land lyeth northnortheaſt nine or tenne leagues, betwixt them it falleth in with a Bight, it is black land with hommocks, and ſandhilles growen with ſpyrie graſſe, here and there ſtandeth a flat ſteeple in the land.

About five leagues from land lyeth a banke of tenne fathom, but it laſteth not long before you get againe deeper water.

Betwixt Boevenberghen and the Holmes lyeth the great Juttiſh Riffe weſt into ſea, running over it in twelve or thirteene fathom, then lyeth the Naze from you, northweſt & by north 24 leagues, running over it in ſeventeen or eighteene fathom, you may ſee the land, on the north ſide it is groſſe ſand, on the ſouth ſide ſtonie like as peaſe and beanes.

Weſtnorthweſt from Boevenbergen about eight leagues it is ſixteen fathome deepe, groſſe ſtonie ſandground: ten leagues from the land it is twentie fathom deep groſſe ſtonie land, like to peaſe.

Southweſt and by weſt from Boevenbergen about nine leagues, it is 25 fathom deep, redde and black ſand ground that is the ground of Doggers ſand.

The Holmes is a plain pointe, going downe ſteepe on the northeaſt ſide, upon the middeſt of the hill ſtandeth a ſquare church without a ſteeple. When that higheſt of the land is ſouthſoutheaſt from you, and that you can but even ſee the north end of it, then it is fifteen fathom deep, groſſe rough ſand, with ſome little ſtones amongſt it.

Two leagues northeaſt, or as ſome ſay, ſomewhat more eaſterly, off from the north pointe of the Holmes: to wit, betwixt the north poynte and the Holmes, and the eaſter pointe, lyeth a ſtone banck (in manner as the Trindell of Leſolde) upon which there is no more then twelve foot water, ſo that there remaineth about two third parts of the water betwixt that Stone-banck and the north poynt, and the other third parte betwixt the Eaſter pointe and the aforeſaid Stone-banck: there have divers ſhippes beene loſt upon it. The foreſaid Eaſter poynt lyeth about four leagues to the eaſtwards of the Holmes, and is alſo a high ſteep poynt, as if it where the Holmes. Right thwart of this eaſter point ſhooteth off a riffe almoſt a league off into ſea, which you may ſound about in ſeven fathom. Some ſay, that men may ſayl through betwixt that riffe and the land.

From the Holmes to Robſnot or Robbeknuyt, the courſe is northeaſt nine or ten leagues.

A little to the weſtwards of Robſnot in the bight towards the eaſtern poynte, neareſt to Robſnot ſtand five churches with flat ſteeples. There lye alſo two blewe lands, betwixt the eaſter poynte and Robſnot, in the high, you may ſee alſo a cloven hill or ſand-hill before you come to Robſnot. It is there all alongſt a flat ſtrand.

To the eaſtwardes of the Holmes goeth in a little river called Miſdorp.

A little to the weſtwardes of that white cliffe or of Robſnot goeth in alſo a little River, where upon lyeth a little towne called Werlom.

Robſnot or Robbeknuyt is a high round hill, upon the toppe where of ſtandeth a church with a ſharpe ſteeple. The land falleth away to the eaſtwards from this point, with a great bight towards Hartſhals. Robſnot.

Thwart of Robſnot it is farre off flat, fifteene fathom depth is almoſt three leagues from the ſhoare.

There alſo thwart of Robſnot about foure leagues from the ſhoare lyeth a banck of nine fathom, lying alongſt the ſhoare.

Thwart of Robſnot lyeth alſo a rock about a league from the land.

From Robſnot to Hartſhals it is northeaſt and by eaſt four leagues, there ſtandeth a flat ſteeple betwixt both, neareſt to Robſnot, there you may ſee the high land of Lackley, alongſt over that high land. Hartſhals.

Hartſhals is a long ſmooth hill, which is at the eaſt end ſomewhat ſteep.

Thwart of Hartſhals lyeth a ſhoale or ſtony ground, about an Engliſh mile from the ſhoare, upon which (as men ſaye) there have beene ſhippes loſt, but men doe ſeldome come neare it.

From Hartſhals to the Scawe or Schagen the courſe is eaſtnortheaſt eight leagues. The Scawe.

The land to the eaſtwards of Hartſhals is altogether full of hommocks and ſand-hills, you may ſee the high land of Lackley alſo alongſt over this land. Alongſt theſe coaſtes men finde none ſuch long plaine hilles, as are Boevenbergen, the Holmes, Hartſhals and Robſnot.

Somewhat within the poynt of the Scawe ſtandeth a flat Church with a flat ſteeple, called Old Schagen, when that is ſouthſoutheaſt from you, then there runneth off from the ſhoare a little ſpitt or ſhoale, there you muſt edge ſomewhat off from the ſhoare, otherwiſe it is all alongſt a ſteep ſtrand betwixt Hartſhals and the Scawe, but you may ſound about this little ſand in four and five fathom; ſo neare as you will.

Upon the eaſt end or outermoſt poynt of the Scawe, ſtandeth a fire beakon, like a Cape to ſee too: when the Church is ſouthweſt and by weſt from you, then are the fire beakon and the ſteeple one in the other, and then you are right thwart of the riffe of the Scawe, which lyeth off from the poynt eaſtnortheaſt, and by north almoſt a league into ſea.

He that commeth from the weſtward, and wil ſayle alongſt by the land, about the riffe, muſt eſpecially bee verie carefull in uſing the lead, he may take the ſounding of the ſhoare, ſo neare as he will, according as the winde ſhall be, in eight, ſeven, ſixe, five, four, and alſo well in three fathom, without doing amiſſe, he needs no to feare: If he be but carefull in uſing his lead, with a ſouthweſt winde, he may ſayl about it in three or four fathom.

When the fire beakon commeth to the eaſt ſide of the houſes of the Scawe, then you come againſt the weſt ſide of the riffe, when the fire beakon and the Church are one in the other, then you are on the eaſt ſide of the Riffe.

When the fire beakon commeth about halfe wayes the houſes, neareſt the weſt ſide, then you are right upon the poynt off the Riffe, what depth that you have then you ſhall keep it ſtill, without finding it ſhoaler whether you ſaile alongſt ſoutheaſt or northweſt.

He that commeth from the ſouthwards, and is bound about the Scaw to the weſtwards may not ſound the Riffe, becauſe the ſouthſide of it is ſteepe and needle too, it is not good to come nearer it then in twelve, thirteen, or fourteen fathom, eſpecially by night or darke weather.

Marks of the Scawe riffe.

For to knowe by certaine markes, when you are cleare of this Riffe, as well over the one ſide as the other, then marke, comming from the weſtwards, when the old church and the fire-beakon are one in the other, then you come upon the weſt ſide of the Riffe: comming from the ſouthwardes or the eaſtwardes, when the old Church commeth in the ſouth end of the village, then you come upon the ſouth ſide of the Riffe. When the ſteeple and fire-beacon are ſouthweſt & by weſt from you, then they are one in the other, & then you are thwart of that Riffe. When the ſteeple is ſouthweſt and ſouthweſt and by ſouth from you, then you are without, or to the weſtwardes of that Riffe: when the ſteeple or fire-beakon is weſtſouthweſt and weſt and by ſouth from you, then you are within the riffe. This you may ſet by night, by the compaſſe, and ſo may perceive wether you be within or without that riffe, when the Firemaker doth fire well. You may anchor on both ſides of the Riffe in ſeven or eight fathom, and have roome enough to ſet ſayle. Some alſo ſay, that men may runne through betwixt the riffe and the land: (If neede require) in two fathom and a half.

Tydes out of the Belt.

Betwixt the Scaw and Maelſtrand or Norwaye it is all ſoft ground, the nearer to Norway the deeper water. When men come out of the Sound, and are in the farewaie, and can gett no ground in eighteen, twentie, and two and twentie fathom, that is a ſighe that they are about the riffe of the *Scawe*.

When you come about the Scawe from the weſtwardes, and are bound to the Sound or the Belt, you muſt take an eſpeciall care of the tyde that commeth out of the Belt, which falleth commonly out of the Belt towardes Norwaye, eſpecially when the winde hath blown a while eaſt or northeaſt, it can carry a ſhipp by night or darke weather under Norwaye, before you ſhould thinke of it, it did happen in the yeare 1605, the three and twentieth of May, that a ſhippe comming thwart of the riffe of the *Scawe*, ſo that the riffe did ly ſouthweſt from her, did drive with calmes in 8 houres, untill ſhee came within three leagues neare to the land of northeaſt, about Harmen ſhooft five leagues to the weſtwards of Maelſtrand, ſo great & ſtrong a current there did ſhoote alongſt by the riffe towards the northeaſt, although it doth ſeldome happen, that the tyde doth run there ſo ſtrong out, yet neverthèleſſe it behooveth men to be verie carefull, to conſider there of, and to reckon there upon.

From the Scaw to Seabuye the courſe is ſouth and by weſt ſixe leagues, there it is upon the road four and five fathom deep. Betwixt the *Scaw* and *Seabuye* lye the ſmall Helmes foure leagues from the *Scaw*, and two leagues to the northwards of *Seabuye*. When you will ſayle unto the Belt, you muſt leave them on the ſtarboard ſide, going on ſtill ſouth and by weſt untill thwart of *Seabuy*, you may alſo ſaile through betwixt the Helmes and the main land unto *Seabuy*, if you will, there is at the ſhoaleſt betwixt them 3 fathom water, but about a ſeaboard the Helmes, betwixt the Helmes and the north end of Leſou, it is foure leagues broad, and in the channell ten fathom deep ſoft ground.

The lying of the Helmes, & how men ſhall come to anchor there, & alſo of all depths, ſhoale & dwale grounds, betwixt the Helmes, the Scaw, and Leſou, together with the deſcription of the Iſland Leſow and the riffes that lye out thereabout it is deſcribed before.

Betwixt Leſou and Seabuy lye many falſe-grounds, which are very uneven of three, foure, five & ſixe fathom the like uneven and ſhoale grounds, lye alſo within or to the ſouthwards of Seabuy, of foure, five and ſixe fathom, but to the right channell through betwixt the falſe grounds of Leſou, and the ſhoals of Seabuy is ſeven and eight fathom deep.

To the ſouthwards of the ſmall Helms and Seabuy, neerer to the maine land the Leſou, lye alſo ſome uneven dwale grounds, upon which there is no more water then 10, 11, and at ſome places 12 foot. He that draweth but 8 or nine foot need not feare of them. You may for a need run through the ſmall Helmes.

For ſaile into Aelburger deep.

From Seabuy to Aelburger deepe, the courſe is ſouth and by weſt nine leagues, upon the north ſide of the haven ſtandeth a flat ſteeple called Hals, in the havens mouth lyeth a buy, and upon the ſouthland ſtand two Capes, which you muſt bring one in the other, by them you ſhall finde the buye, the channell lyeth in firſt weſt and by ſouth, about a cables length, then you muſt run up northweſt and weſt right unto Hals, and run in by the north ſhoare, untill thwart of Hals from the ſouth poynt of the land ſhooteth off a flat which you muſt avoyd: being thwart of Hals you muſt goe ſouthweſt and by weſt unto the bight; and in the crooked channell, you muſt ſhun the north ſhoare ſomewhat and then againe northweſt and by weſt alongſt by the north ſide, unto the ſecond crooked, and then ſouthſouthweſt and afterwards weſtſouthweſt unto the town, in the comming in by the buye, it is two fathom. But for to ſayle in there, it is beſt to take a Pilot. By the ſouth ſhoare goeth in alſo a little deepe of ſixe and ſeven foot.

The towne *Aelburgh*, lyeth up in the land foure leagues, within the river. *Alſo* there lyeth alongſt this coaſt to the weſtwards ſome bancks, there you muſt ſhunne the land ſomewhat.

When you ſail from the Helmes to Stevenshead, through betwixt the dwale-grounds and the flat of Seabuy, you ſhall meet with a ſhoale ground, about half wayes betwixt Stevenſhead and Seabuy or 5, 6 and 7 fathom. This ſhoale is called the Swetering, & lyeth about 3 leagues eaſtwards from *Aelburgh* deep, the channell there betwixt them is about ten or twelve fathom deep.

The Swetering.

From *Aelburgh* deep to Haſelin, the courſe is ſoutheaſt and by eaſt about 20 leagues.

From *Aelburgh* deep to Stevenſhead the courſe is ſoutheaſt and by ſouth about nine leagues. There betwixt them the land lyeth in a great Bay, wherein lye the two little townes Mariacker and Randerſen: Mariacker lyeth from *Aelburgh* deep ſouth and ſouth and by weſt foure leagues, and from Stevenſhead five leagues. Betwixt Mariacker and Stevenſhaven lyeth the River of Randerſen, which runneth up crooked farre in to the land, unto the little town Schandelburgh.

Stevenshead. Mariacker Randerſen.

Under the wood of Mariacker runneth a riffe from the ſhoare, and ſtretcheth neere to Stevenſhooft, by Mariacker neere unto the ſhoare it is 12 foote & further 3 and 4 fathom faire ſandy ground, within the riffe it is 6 and a halfe & 7 fathom ſoft ground, a little without Stevenſhooft it is ſtony ground but neere the ſhoare it is ſandy ground.

From Stevenſhead to Haſelin the courſe is eaſtſouth-eaſt 13 leagues. Haſelin is on the outher ſide full of ſhoales, riffes, and grounds. *A* larger deſcription of Haſelin and *A*nout as alſo of all the foule grounds and ſhoals, lying thereabouts, you ſhall finde in the firſt Demonſtration of this book.

Haſelin.

A little to the ſouthwardes of Stevenſhead lyeth a little town called Oruntbuy, there lye the Chalck-grounds right before the river of Grimſound in a bay a little about the poynt of Stevenſhead: that is a ſand two or three foot water, but not far off it, it is ten fathom deep, you may ſound them in foure fathom. You may ſayle up in to Grimſound, unto Grimſtee, that is a lading place for Huyes.

Oruntbuy. Chalck grounds.

From Stevenſhead unto the great Helme the courſe is ſouthſouthweſt about ſixe leagues. The land lieth from Stevenſhead unto the poynt of Ebeltud ſouthſouthweſt ſeven or eight leagues. Ebeltud is a little Towne, lying within the land thwart of the great Helme. Betwixt the great Helme and Jutland it is ſixe and ſeven fathom deepe. Cloſe by Stevenſhead, and the poynt of Ebeltud it is eight, nine and alſo tenne fathom deepe. The great Helme hath two Riffes, one

Great Helme.

one upon the northeaſt ſide, and the other upon the ſouthweſt ſide.

From Stevenſhead to Siero the courſe is ſouthſouth-eaſt and ſouth eaſt and by ſouth nine leagues. Betweene Siero and Stevenſhooft lye ſome ſhallowes, but neere Stevenſhooft there upon it is 3 and 4 fathom deepe.

From the ſoutheaſt poynt of Syero lyeth off a riffe towards Ruſnes, where you may anchor behind it.

Wero. From the great Helme unto the Iſland Wero, the courſe is northnorthweſt, and ſouthſoutheaſt, foure leagues diſtant, there it is foure and five fathom deep. From Wero there runneth off a ſhoale unto Kyholm, and about Kyholme: and alſo about the little Iſland Samps; it is alſo full of ſhoale grounds, which run off unto the great Iſland Sampſo.

Kyholme. Samps.

From the great Helm unto the Iſland Sampſo it is ſouthweſt & northeaſt foure leagues.

Sampſo. From the north end of the Iſland Sampſo there ſhooteth off a little riffe north into the ſea, you muſt ſound cloſe about by it for to come into the road of Sampſo, when you will anchor there. It is there in the road tenne fathom deepe, and you ſhall be there under the Swan-grounds ſheltred for all winds.

Aerhuyſen. From the ſouth end of Ebeltud to Aerhuyſen, the courſe is weſt and by ſouth, and weſtſouthweſt five leagues. It is there all ſhoale water of two and three fathom deep. He that will anchor in the road before Aerhuyſen, let him bring the great ſteeple in the midſt betwixt the two other ſharp ſteeples, there is the beſt ground, and good road in three, foure, and five fathom, ſo ſhoale as you will. To the ſouthwards of Aerhuyſen goeth in the Wederſound betwixt Jutland and Sampſo: he that will ſayle in there, muſt bee wel acquainted, for it is there all full of riffes and ſhoals. You may not alſo uſe that fareway by night, by reaſon of all the ſand and ſhoals, and alſo by day you muſt be very carefull & circumſpect in looking out, and not ſpare your lead, but you may anchor and have road there every where. When you will ſaile through the Wederſound, comming off from the great Helme or Ebeltud, you muſt leave the Iſland Thuns and the Swangrounds on the larboard ſide, running all alongſt by the Jutti ſh coaſt in 2 or 3 fathom, untill paſt Horſens, or the Iſland Endelau, which you may not ſayle to, not come neare from the weſtwards, by reaſon of all the grounds, which lye before it on the weſt ſide. It is a narrow channell betwixt Endelau, and the main land, lying from the Wederſound through the Swan-grounds ſouth, it is on both ſides ſhoale, and but a creek for to ſayle through.

Wederſound. For to ſail throug the Wederſound. Swan-grounds.

When you come off from the Melverſound and will ſayle through the Wederſound, it is beſt to runne alongſt by the Jutti ſh ſide untill thwart of the river of Horſens, then you muſt edge ſomewhat off there from the land, and ſayle right with the Iſland Tons, and ſo you runne through betwixt the Norther and Souther grounds, leaving the Iſland Tons on the ſtarboard ſide. When you are then paſt Tons, you ſhall runne out cloſe by the north poynt of Sampſo, towards the land of Ebeltud, it is altogether one courſe from Horſens to Tons, and forth to Sampſo, and the poynt of Ebeltud, to wit, northeaſt and ſoutheaſt eight or nine leagues.

Melverſound. From Horſens, or that Iſland Endelaw unto the Melverſound, the courſe is ſouth and ſouth and by weſt, 7 or 8 leagues. The Melverſound is a deep ſound of 20 and 25 fathom, very crooked to come into, it goeth in betwixt Fuynen & Jutland, which are both high lands. From the Iſland Ebelo unto Melverſound the courſe is ſouthweſt and ſouthweſt & by ſouth five great leagues.

Ebelo. From the road of Sampſo to Ebelo the courſe is ſouth & by weſt 5 leagues. From the ſouth end of Sampſo to Ebelo the courſe is ſouthweſt and by ſouth 4 leagues.

Roems. From Sampſo to Roems the courſe is ſoutheaſt and by ſouth ſix leagues. The northweſt coaſt of Fuynen lyeth ſouthweſt and by weſt eight leagues. The little Iſland Ebelo lyeth off a league from the ſame, right before Bowens, but you cannot ſayle through betwixt the Iſland and Fuynen. To the ſouthwards of the Iſland lyeth a great rocke under water, betwixt this rock and the Iſland is the road before Bouwens in eight and nine fathom. Road before Bounes.

Betwixt Syro and Wero lyeth a dangerous riffe, long and broad, lying further then halfe way to Syro. When you will runne through betwixt the two foreſaid Iſlands a weather of Ruſſeneſſe, you muſt leave at leaſt the two third parts of the water on the ſide of Wero, and goe in ſouthſouthweſt towards Roems, which is nine leagues diſtant.

The foreſaid riffe is called Haters riffe, is on the eaſt ſide very hard and ſtony, hee that commeth from Baltſack, he ſhall run cloſe to the Iſland Wero, for to avoyd that riffe, the channell betwixt the riffe and Wero is not very broad, & 3 fathom, or 3 fathom & a halfe deep. He that commeth from Roems or Ruſnes, & wil ſaile through Wero ſound, let him bring the great Helm to the eaſt ſide of Wero, and keep them ſo ſtanding, ſailing on ſo right with them, he ſhall (ſo doing) take no hurt of Haters riffe. Betwixt Syro and Haters riffe and ſomewhat more ſouthwardly, the ground is very uneven of 5, 6, 7, 8, and 9 fathom. On the ſouth ſide of Haters riffe it is good anchoring for northerly winds, in ſix & ſeven fathom. Haters riffe.

Ruſnes and Syro lye northnortheaſt and ſouthſouthweſt about five leagues aſunder.

From the poynt of Ruſnes runneth off a little riffe to ſeawards, but to the eaſtwards of it betwixt Ruſnes and Haſelyn, lyeth off a riffe at leaſt two leagues into ſea, which lyeth dry at the end, & by it, it is very ſteep, cloſe alongſt by the end, it is eight fathom deep.

From Ruſnes to Spro it is ſouth and by eaſt eight or nine leagues. Betwixt Ruſnes and Spro lyeth Callenburch, which is alſo a lade place, and about 2 leagues to the ſouthwards of Callenburch lyeth a flat alongſt the coaſt about a league from the ſhoare of five fathom depth, you muſt alſo avoyd the ſouth corner of Callenburgh, for there ſhooteth off a riffe halfe a league into ſea, there is alſo to the northwards a long flat alongſt the ſhoare, but not deep to the ſeawards, betweene Callenburgh and Ruſnes it is good lying for an eaſterly wind. Callenburgh.

From the eaſt end of Spro runneth off a little riffe or ledge of rocks, and over againſt it commeth alſo a flat ſhooting off from the land, betwixt them both it is foure and five fathom deep. Going on the ſouth ſide of Spro it is alſo very foule, more then halfe a league without the ſhoare. But behinde or thwart of Spro lyeth Caſſeur, a faire Haven, where men doe lie at the Kay, and let their goods be carried into the ſhips, where alſo it is betweene both fourty, fifty, and ſixty fathom deepe, but in the middle of the fareway lye ſome banks, where there is no more then five and ſix fathom water, good ſtrand ground. Caſſeurs.

From Spro to Langeland the courſe is ſouth and ſouth and by eaſt foure leagues diſtant. He that commeth alongſt to the eaſtwards of Wero, through the channell betwixt Wero & Haters riffe, and will ſaile to Roems, let him go on due ſouth and by eaſt, and then he ſhall runne alongſt about an Engliſh mile to the eaſtwards of the Boltſack, and fall with the land a little to the eaſtwards of Roems: likewiſe hee that goeth from Roems, or a little to the eaſtwards of it, on north and by weſt, hee ſhall fall betwixt Wero and Haters riffe right in the fareway. Betwixt Roems and Fuynen you may run through in two fathom, but with great ſhipps you cannot goe through there.

From the north end of Fuynen ſhooteth off a little riff about an Engliſh mile into ſea. About a league eaſt and by north from Roems lyeth a ſhoale of 3, 4, and 5 fathom, which is ſteep, and ſhoaleth up ſo ſuddenly, that a man, not knowing of it, and finding it ſo by the lead, ſhould bee affrighted at it. To the ſouthwards of Roems, in the land of Fuynen lyeth a little towne, for,

Carte-monde. to lade, called Cartemonde. The Haven goeth in from the eastwards, and it is shoale on the west side, there lye no buyes in the Havens mouth, there is no more water then five, six, or sometimes seven foot.

Spro. From Roems to *Spro*, the course is southeast 5 leag. Betwixt Spro and Knuytshead, it is 12 and 13 fathom deep. But betwixt Roems & Spro, it is 10, & 11 fathom deep.

Even about to the southwards of the poynt of Knuytshead in Buyen, lyeth the Haven of Nyburgh, when you Ny-burgh. are about the poynt, you runne right up to the towne, about northwest, a league, there it is 6, and 7 fathom deep. Men doe lye there with ships to the Kay, and let their goods bee carried in what they will.

From Knuytshead to Langeland the course is southeast 4 leagues, & then you leave Spro lying on the starboard side. From the southwest end of Spro shooteth off a little riffe which you must avoyd. *At* the north end The Friss-sell. of Langeland lyeth the little Islands of the Frissell, which are round about very foule. From Knuytshead to the Islands Tassing, the course is south and south and by east foure leagues, and then you leave the Frissell lying on the larboard side, and run through betwixt the Frissell Swin-burgh. and Fuynen. If you be bound to Swineburgh, then go from the Frissell to the southeast end of Fuynen, on southsouthwest, and you shall meet a little Island which you may runne about on both sides of it. Through betwixt Tassing, and that little Island, or you may run alongst by the land of Fuynen, untill that you come to the little Towne of Swineburgh, which lyeth over against the Island of Tassing. Over against the poynt of Olmes. Fuynen lyeth a little Island called Olms, then you must goe up to the westwards. You may also runne about on the other side of Tassing, and leave the Island *Arr* with the foule grounds (which lye betwixt *Arr* and the southeast end of *Fuynen*) on the larboard side of you, it is no deeper upon these grounds then six foot. Now when as that you shall come by the little Island Olms, or by the southeast poynt of *Fuynen*, then you must (as before is said) goe up to the westwards about the poynt of Fuynen towards Woburgh. Upon the south side of these foresayd grounds goeth also a Deepe through, west, and west and by south through betwixt the grounds and the Island *Arr*: upon this Island *Arr* lyeth a little Towne Ko-ping. called Kooping. This foule ground is 3 leag. long, and that Island Arr is also 3 leagues long, they lye both of them east and west, and the Munck Island lyeth at the end of these grounds before Woburgh in Fuynen, which hath two riffes, the one shooteth off from the southeast end east into sea, the other from the north point northeast into the sea. When you saile through to the northwards of these grounds, to wit, betwixt Fuynen and these grounds, towards Woburgh, you shall also meet with the foresayd Munck, with another little Island or two more, leave them lying on the larboard side, and run all along by the land of Fuynen, about west and west and by north. Unto the poynt of Askens, which is about six Af-kens. leagues distant from the southeast poynt.

From the east poynt of *Askens* unto the little Island Toreu. Toreu, the course is west and by north, and westnorthwest two leagues, and to Areu westsouthwest 3 leagues, these two little Islands lye one over against the other, the one on the side of Jutland, and the other on the side of *Fuynen*, men runne through there betwixt 2 riffs which run off one against the other, it is there 4 and 5 fathom deep.

To the northwards or westwards of Areu lyeth the Sound of Hadderslew, which lyeth in about west and by Sound of Had-der-sleu. south, upon it lyeth the towne Hadderslew two leagues within the land.

From Areu or Toreu to Melversound the course is northnorthwest five leagues, which you must run into Sound off Col-din-gen. from the southwards first westwards unto the sound of Coldingen, being a broad sound, which goeth a league into the land, if you will goe through the Melversound, you must leave it on the larboard side, and goe up to the eastwards unto the towne of Melver, where you come then againe into a crooked channell. The Melversound goeth out to the northwards with a very crooked channell, and you come out againe upon the broad water to the northwards of Fuynen, as is before sayd. You may also sail off from Areu into the sound of Aelsem alongst soutsouthwest unto Apenrade, and then about behind the Island of Aelsems untill you come into the sound of Apen-rade. Flensburgh.

The Melversound & the little Island *Areu* lye southsoutheast and northnorthwest one from the other.

To saile out of the Aelsen sound from Areu or the Melversound, then goe from Areu or Toreu outo the Roen eastsoutheast 3 leagues, and then through betwixt the Island and Fuynen, that is alongst to the northwards The Roen. of Roen, for you can not goe about to the southwards of it. The *Roen* is a bad and shoaly riffe shooting off from Aelsen, whereunto it is fast, the outer end of it lyeth dry like Anoutriffe. From the *Roen* to Arr or Koping the course is east and by south 5 leagues.

From the south east end of Aelst shooteth off a great riffe towards Arr called the Poles riffe: you must run betwixt Arr & that riffe, leaving two third parts of the wa- Poles riffe. ter on the Aelsen side, and one third part towards Arr, & runne on so with the south end of Langeland, untill that you come against Copen.

From *Arr* to the south end of Langeland, the course is east-southeast, foure leagues. *And* from the Poles riffe to the south end of Langeland, the course is west & west and by north six leagues. You may run through betwixt Langeland and *Arr* to the northwards and come out againe into the Belt by Nyburgh: from the south end off Langeland to Tassing, it is north six leagues; you may sail about Tassing on both sides, and leave *Arr* and the foule grounds, lying on the one side of you. Upon Tas-sing. these grounds it is but 6 foot deep.

You may also saile through betwixt the foresayd grunds and Fuynen into te sound of *Aelsen*, unto the little Islands of *Areu* and Toreu, as hath been sayd here before.

From the little Island *Areu* to *Apenrade* the course is south and by west five leagues. The sound of *Apenrade* is a broad open sound, upon which lyeth te foresaid towne of *Apenrade*.

From the river of *Apenrade* unto the crooked chan- The sound of Apen-rade. nell of Sonderburgh, which goeth in betwixt the Island *Aelsen* and the maine land, the course is east 3 leagues, there you may saile through about behinde the Island of *Aelsen* to Sonderburgh, and then forth into the sound of Flensburgh. It is very narrow and crooked betwixt the Island and the maine land, but when you are come through the narrow and crooked channell into the sound of Flensburgh, there it is broader and larger.

The sound of Flensburgh goeth in betwixt Sonder- Sound of Flens-burg. burgh and Holsterland, being a braod sound. He that will saile in there, must take very good heed of the Holsterside, when you begin to come betwixt the two lands, and run in alongst by the land of *Aelst*, for from Nubell or Holsterland lye off the Chalck grounds halfe wayes the deep. This sound lyeth in west and by south untill Cas-tle. that you come before the river. There lyeth in the rivers mouth a little Island on the starboard side, you must run into the eastwards of it, and goe in west and by south & west, untill you come within the crooked channell of the River or Sound, and then you must goe up againe southwest then you shall see the towne of Flensburgh lye before you.

To the southwards of the Sound of Flensburgh, lye yet three Sounds or rivers, where great ships may goe into, to wit, the *Sley*, Nylhofvoert and the *Sound* of Kiel, the land lyeth off from Flensburgh to Kiel southsoutheast or somewhat more easterly sixe leagues.

From *Sonderburgh* to the *Sley* the course is southeast The Sley. and by east foute leagues, that is, a broad deepe sound, lying

lying in firſt about weſt, and when you are within it, then it runneth in about ſoutweſt and by weſt paſt Sleeſwyke, there alſo come ou many great ſhips. The town Gottorpe lyeth alſo upon this river.

Betwixt the Slye and Kiel lyeth Nylhofvoert upon it lyeth a little towne called Eeckelenfoort.

The ſound of Kiel is a broad Sound, which lyeth in about ſouthweſt, there you may go in alſo with great ſhips. From Kiel to the weſt end of Femeren it is eaſt & by north about eight leagues.

From the Poles riff to Femeren (over the Coelberger Heyd) the courſe is eaſtſoutheaſt 13 or 14 leagues, but from the ſouth end of Langeland unto Femeren it is ſoutheaſt & by eaſt eight leagues. The channell betwixt Femeren and Laland is 5 and 6 fathom deepe, you may ſayle round about Femeren, there it is all ſhoale ground. Betwixt Femeren and Holſterland, you may run through in eight or ten foot, there lyeth a little town, called Heyliger haven, where you may anchor with ſhips of ſmall draughts for to lade wheat or barley. From the Iſland Femeren to Geſter-rif the courſe is eaſt and by north ten leagues. But from femeren to the Trave of Lubeck ſouthſouthweſt ten leagues: there goeth in a good deep for great ſhippes, it is deep upon the banck twelve foot water.

There is alſo a great bay and a good haven, where men may lye ſafe for all winds, except the northeaſt and northnortheaſt winds. From the Trave of Lubeck to Geſter-rif the courſe is northeaſt and ſouthweſt about nineteene leagues.

From the Trave of Lubeck to Wiſmer-deep the courſe is firſt northeaſt and by eaſt, and then eaſtnortheaſt, there goeth in a faire deep for all ſorts of ſhips.

For to ſayle in at the deep of Wiſmer, bring the ſteeple upon the ſouth land ſouth from you, and ſayle ſo in untill that the ſteeple ſtanding upon the eaſt land, by that eaſtermoſt houſe, commeth to the five or ſixe houſes, by theſe houſes ſtand ſome trees together, from that eaſt land runneth off a little riffe, lying off northweſt & by north from it, when the ſteeple commeth to thoſe houſes, then goe in ſouthſoutheaſt, in that deepe is twelve foot water. In the Summer there lye two buyes in the havens mouth, the one upon the tayle of the ſand that ſhooteth off from the eaſtland, and the other upon the ſhoale ground, you muſt run betwixt them. This deep of Wiſmer lyeth from Femeren ſouthſoutheaſt diſtant about ſeven or eight leagues, but from Wiſmer to Geſter riffe, the courſe is northnortheaſt, twelve or thirteene leagues.

About ſouth from Geſter riffe lyeth *Roſtick*, there goeth in alſo a good deepe of ten foot, it is there very flatt, you may ſound it in on both ſides with the ſounding pole. Wiſmer and Roſtick lye about eight leagues aſunder.

Somewhat to the eaſtwards of *Roſtick* lyeth a high land called *Robbeneſſe*, from it ſhooteth off a great riffe or ſhoale to ſeawards, towards Geſter riffe, it is betwixt Geſter riffe and that ſhoale not deeper then twelve or thirteene fathom. If you come neareſt to Geſter riffe, then it doth ſhoale up ſuddenly, but if you come neareſt this ſhoale, then it ſhoaleth by little and little. Geſter riffe, as hath been beforeſayd, is a ſhoale riffe, and runneth off at leaſt three leagues into ſea.

A little too the eaſtwards of this foreſayd ſhoale lieth Barts, there goeth in a deepe of ſix foote, at the weſt poynt goet off a riffe, which men muſt avoyd.

The Iſland Langeland is about eight leagues long, and lyeth ſouth & north, to the eaſtwards, over againſt it lyeth the Golverſound, lying into the northwards of Laland, all alongſt up unto Neſtvelt and Wordenburgh, and commeth into the Greenſound, and in the Wolvegat, and again into the eaſt ſea: Before the Golverſound lye three little Iſlands the one at the poynt of Laland, which is called Wedero, and is alſo faſt to it with a riff, ſo that men cannot ſayl through there betwixt them; to the northwards of it men doe runne into the Golverſound, leaving that Iſland on the ſtarboard ſide: the other two lye to the northwards of the foreſayd Iſland of Wedero, the one is called Arnis, & the other Ooms. Ooms is a little playne Iſland, but Arnis is the greateſt, which lyeth neareſt to Zealand, & is full of trees. From the Iſland Ooms, lieth off a riffe ſouthweſt to ſeawards, which is a great league long, and upon the end flatt, which men may runne over by the lead. When you will ſayl into the Golverſound, you muſt leave theſe two Iſlands lying on the larboard ſide. The Iſland Laland hath upon the weſt poynt over againſt the ſouth end of Langeland, a riffe or Hooke, lying off from Laland at leaſt half waye over the Belt: for to avoyd that, you muſt runne alongſt within an Engliſh mile to the eaſtwards of Langeland; or when that you leave the two third parts of the water on Lalands ſide, and the other third part on the ſide of Langeland, you ſhal not come too neare it. When you come from the ſouthwards, & are bound into the Belt, and that then the ſteeple of Maſcon, which ſtandeth upon Laland commeth to ſtand northeaſt and by eaſt from you, then you are paſt that riffe, and lyeth to the ſouthwardes of you; It is here in this Cannell betwixt Laland and the ſouth end of Langeland, five, ſixe, and ſeven fathom deep.

Arnis Ooms.

Riffe on Laland.

From the ſouth end of Langeland to Femeren the courſe is ſoutheaſt and ſoutheaſt and by eaſt diſtant eight leagues.

When as you come off from Langeland and are paſt the riffe or Hooke of Laland, then the ſouth coaſt of Laland lyeth eaſt & weſt: alongſt by it lyeth a ſand, which is called the Red-ſand, & lyeth alongſt untill before Golverſound which runneth in betwixt Laland and Geſter.

Red-ſand.

To the northwards of this ſand is a roade of fourteen, ſixteen, and eighteen foot water, before the little townes of Aelholm and Roo-buy, where men do lade nuts and Barley.

Aelholm Roo-buye.

Betwixt Laland and Geſter, thwart of this Red-ſand (as hath been ſayd) runneth in the Golverſound, which men may run into, & come out again into the Belt, but in this ſound or channell there is little depth, there lyeth a ſtone banck within thwart over the channell. The little town Nicoppen lyeth upon the Iſland Falſter a league within Geſter. From Geſter ſhooteth of Geſter riffe, at leaſt three leagues into ſea, which is a ſhoale riffe.

Nicoppen. Geſter-rif.

To the eaſtwards of Geſter riff lieth an Iſtand called Bout, it is there abouts all ſhoale water; to witt, three and four fathom.

Bout.

To the eaſtwards of Bout goeth in the Green ſound, by the little towne Stuybekuype, & commeth out again into the Belt to the northwards of Laland: then Green ſound lyeth in about weſt and weſt and by north in three fathom, there lyeth a ſhoale on the larboard ſide of the mouth of the Sound, called the Tolck, which men muſt avoyd: you muſt goe into the eaſtwards of it, you may lead it in alongſt by the land of Meun, in fourteen or fifteen foot, that foreſayd town Stuybekuype lyeth about a league within the mouth of the channell.

Greenſound. Tolck. Stuybekuype.

From Geſter riff to Meun, the courſe is northnortheaſt ſeven leagues: but from Bout to Meun it is northeaſt about ſix leagues.

From the Golverſouud to Meun, the land lyeth in a bay you may anchor there for a northeaſt, north, northweſt, and weſt winde, in five and ſix fathom.

Meun.

He that commeth out of the Sound, and is bound to the ſouthwards of Meun, may come ſo near Meun as he will, and luffe up to the weſtwards by the poynt, and anchor where he pleaſe, in five or ſix fathom. On the north ſide of Meun you may alſo anchor in ſix fathom, behinde a little riffe that ſhooteth off from the north poynt, for an eaſt, ſouthſouthweſt and weſt wind, it is there all over flat, and good ground.

Of the depths about theſe places, and in what depths men may ſee the land.

In the Ripe, Eyder and Hever, a ſouth & north Moone maketh the higheſt water, the floud commeth there out of the northweſt, and the ebbe out of the ſoutheaſt, and ſo run over the north gronds.

In the deep of Liſt or Silt, a ſouth and north Moone maketh the higheſt water, the floud commeth there out of the northweſt, and falleth very little alongſt the land, and the ebb to the contrary.

In Knuytsdeep, a ſouthſouthweſt and northnortheaſt Moone maketh the higheſt water. The floud commeth there alſo out of the northweſt and falleth but a great quarter tyde alongſt the land, and the ebbe to the contrary.

In the Haven of Zuyder-zyt, the Growe-deepe, the Schellinghkroegh a ſouthſouthweſt and northnortheaſt Moone maketh the higheſt water, the floud commeth there alſo out of the northweſt and falleth over the Reefs-horne towards the Juttiſh Iſland, and the ebbe againe to the contrary, off from the land in the north Sea.

Of the grounds and Depths.

The grounds of the Hever and the bankes of the Small deep without Strand and Eyderſtee, lye at leaſt two leagues without thea coaſt of the land.

Betwixt Holyland and *A*meren or Strand it is tenne or eleven fathom deep, in that depth you may ſee both the lands, if you climbe up in the ſhroudes. Strand is to bee knowne by the ſteeple of Pielworme, ſtanding upon the ſouth end of the land: Upon the Iſland Strand ſtand more Churches and ſteeples, but none ſo eaſy to be knowne as Pielworme.

Ameren is a league and a halfe long, & hath all alongſt low ſandhills growne with ſpirz graſſe.

The Iſland Silt you may ſee in ten fathom: *U*pon this Iſland (neareſt to the north end) lyeth a high ſteepe red kliffe, on both ſides going ſloping downe; upon the ſouth ſide of the cliffe ſtandeth a flat Church, which a low ſteeple, and to the eaſtwards of it another Church, with a high thick ſteeple called Heydom. The north end of the Iſland is called Liſt, and the ſouth end Voortrap.

Courſes and Diſtances.

*F*rom the Eyder to Hever the land lyeth northnorthweſt and ſouthſoutheaſt 5 leagues.

*F*rom the Hever, or the ſouth end of *S*trand to the ſouth end of *A*meren northnorthweſt about 5 leagues.

Two leagues north from Ameren lyeth Silt, which is about five leagues long, and lyeth ſouth and by eaſt, & north & by weſt.

*F*rom the north end of Silt, called Liſt, unto the ſouth end of Rim or Rem, it is northeaſt and ſouthweſt one great league, *R*em is three leagues long, and lyeth moſt ſouth and north.

From the north end of Rem, to the ſouth end of Manu, it is northeaſt and ſouthweſt a league and a halfe, you can hardly get ſight of it by reaſon of the grounds, and great ſhoals, which lye thwart of it to ſeawards.

Manu and Phanu lye about two leagues one from the other, Manu is almoſt a league long, and Phanu about 4 leagues long, and lyeth from Phanu Knuyters to Knuytes-deepe, ſouthſoutheaſt and northnorthweſt. This Iſland hath alſo a faire ſtrand, but the north end towards Growe-deep is very flat.

From Phanu to Doodenbergh it is about foure leagues, betwixt them lye the Havens of the Growedeepe and *S*chelling-kroegh.

From Holyland to the Eyder eaſt and by north, and weſt and by ſouth 7 leagues.

*F*rom Holyland to the outermoſt buy in the Hever, northeaſt and ſouthweſt 8 leagues.

You may lye by the outermoſt buye in the Hever, and ſee Holyland with cleare ſight.

From Holyland to *A*meren or Small-deep, northnortheaſt, ſomewhat eaſterly, and ſouthſouthweſt, ſomewhat weſterly 10 leagues.

From Holyland to the deepe of *S*ilt or Liſt, north and by eaſt 17 leagues.

From Holyland to Knuytsdeep or Ryper-deep, north and north and by eaſt 23 leagues.

*F*rom Holyland to the horne or the Doodenbergh north and ſouth 30 leagues.

*F*rom Knuyts-deep or the Iſland Phanu to the *F*lye, ſouthweſt and by ſouth 50 leagues.

From the Iſland *S*ilt to the *F*ly northeaſt and ſouthweſt, 46 leagues.

From the Doodenbergh or the Horne, to the Haven or Numen or Rinkopper-deepe, north and by weſt ſeven leagues.

*F*rom the *R*inkopper-deep, or the Haven of Numen to Boevenbergen north and by weſt about 10 leagues.

*F*rom the Doodenbergh to Boevenbergen, the land of Jutland lyeth north and by weſt, and ſouth and by eaſt 17 or 18 leagues.

From Boevenbergen to the Holmes northnortheaſt, 9 leagues.

From the Holmes to *R*obſnot or Robbeknuyt northeaſt 9 or 10 leagues.

From Robſnot to Hartſhals northeaſt and by eaſt four leagues.

*F*rom Hartshals to the Scawe or Schaghen eaſt-northeaſt 8 leagues.

*F*rom Rinkopper or Numer-deep to the *F*ly ſouthſouth weſt or a little more weſterly about 58 leagues.

*F*rom Boevenbergen alongſt Jutland, without the grounds unto the Elve or the outermoſt buy ſouth & by eaſt about 48 leagues.

*F*rom Boevenbergen to Holyland, ſouth & by eaſt ſomewhat ſoutherly about 43 leagues.

From Boevenbergen to the Flye or Borneriffe ſouthſouthweſt about. 67 leagues.

*F*rom Boevenbergen to the north Forland ſouthweſt & by ſouth 118 or 120 leagues.

*F*rom Boevenbergen to the Holmes before Yarmouth ſouthweſt 93 leagues.

From Boevenbergen to Flambrough-head weſtſouthweſt weſt ſomewhat ſoutherly 98 leagues.

From Boevenbergen to Scharbrough weſtſouthweſt ſomewhat ſoutherly 100 leagues.

*F*rom Boevenbergen to the *R*iver of New-Caſtle or Tynemouth weſt and by ſouth about. 106 leagues.

From Boevenbergen to Boecknes weſt & by north about 106 leagues.

From Boevenbergen to the Naze northweſt and by north 24 leagues.

From the *R*iffe in ſixteene fathom to the Fly ſouth and by weſt 65 leagues.

From the Riffe in eighteen fathom to the ſtrait betwixt Callice and Dover ſouthſouthweſt about 120 leagues.

From the Holmes to the Naze northweſt about 19, or 20 leagues.

From the Holmes to Fleckery northweſt and by north- 19 leagues.

From the Holmes to Mardow north 27 leagues.

Froms the Holms to Longſound north and by eaſt 35 or 36 leagues.

from the Holmes to Ferderoer northnortheaſt 40 leag.

From the Scawe to Tynemouth weſtſouthweſt 130 leag.

*F*rom the Scawe to the Naze weſt 33 leagues.

*F*rom the Scaw to Fleckery weſt and by north 25 leag.

From twe Scaw to Reperwick weſt and by north and northnorthweſt 24 leagues.

From the Scawe to Mardowe northweſt and by weſt 20 or 21 leagues.

From the Scawe to the Longſound northweſt & by north or little more northerly 22 or 23 leagues.

*F*rom

From the Scawe to Ferderoer north and by weſt 23 leag.
From the Scawe to Otturen north and by eaſt, ſomewhat easterly 42 leagues.
From the Scawe to Maelſtrand eaſtnortheaſt 13 leagues.
From the Scawe to Nidinck eaſt and by ſouth 15 or 16 leagues.
From the Scawe to Waeſbergen eaſtſoutheaſt 19 or 20 leagues.
From the Scaw to the Trendels ſoutheaſt 8 leagues.
From the Scaw, about a ſeaboard, the Trendels ſoutheaſt and by eaſt 8 leagues.
From the Scaw to Leſou ſouthſoutheaſt 8 leagues.
From *Scaw* to the *Small* Helmes ſouth 4 leagues.
From the Scaw to *Seabuy* ſouth and by weſt 5 leagues.
From the Helmes to *Seabuy* 2 leagues.
From Seabuy to Aelburger-deep ſouth and by weſt 9 leagues.
From Aelburgher-deep to Mariacker ſouth and ſouth and by weſt 4 leagues.
From Aelburger-deep to *Stevenſhead* ſoutheaſt and by ſouth 9 leagues.
From Aelburger-deep to Haeſlin ſoutheaſt and by eaſt 20 leagues.
From Stevenſhead to Haeſlin eaſtſoutheaſt 13 leagues.
From Stevenſhead to the great Helme ſouth and by weſt about 6 leagues.
From Stevenſhead to the poynt of Ebeltud ſouthſouthweſt 7 or 8 leagues.
From Stevenſhead to *Syro* ſouthſoutheaſt and ſoutheaſt and by ſouth. 9 leagues.
From the great Helme to Were ſoutſoutheaſt 4 leagues.
From the great Helme to *Sampſo* ſouth 4 leagues.
From the ſouth end of Ebeltud to *Aerhuyſen* weſt and by ſouth and weſtſouthweſt 5 leagues.
From the road of *Sampſo* to Ebelo ſouth and by weſt 5 leagues.
From the ſouth end of *Sampſo* to the Iſland Ebelo, the courſe is ſouthweſt and by ſouth 4 leagues.
The northweſt coaſt of *Fuynen* lyeth ſouthweſt and by weſt 8 leagues.
From Endelaw to Melverſound ſouth and by weſt 6 leag.
From Ebelo to Melverſound ſouthſouthweſt, ſomewhat ſoutherly 5 leagues.
From Sampſo to Roems ſoutheaſt & by ſouth 6 leagues.
From Syro to Roſnes ſouthſouthweſt 5 leagues.
From by weſt Syro to Roems ſouthſouthweſt & ſouth and by weſt 9 leagues.
From Wero to Bultſack ſouth and by weſt 4 great leag.
From Wero to Romps ſouth and by eaſt 8 leagues.
From Romps to Knuytſhead ſouth & by eaſt and ſouthſoutheaſt 5 leagues.
From Knuytſhead to Langeland ſoutheaſt 4 leagues.
From Knuytſhead to the Iſland Taſſing ſouth and ſouth and by eaſt 4 leagues.
From the ſoutheaſt end of *Fuynen* the eaſt poynt of Aſken, weſt and weſt and by north 6 leagues.
From the poynt of Askens to the little Iſland of Toreu, weſtnorthweſt and weſt and by north 2 leagues.
From Areu to Melverſound northnorthweſt 5 leagues.
From the poynt of Ruſnes in Zealand, to the Iſland *Syro*, northnortheaſt and ſouthſouthweſt 5 leagues.
From Ruſnes to Caſſeur ſouthſoutheaſt 9 or 10 leag.
From Spiro to Langeland ſouth and ſouth and by eaſt 4 leagues.
From the north end of Langeland to the ſouth end ſouth 8 leagues.
From the ſouth end of Langeland, to the Iſland Arr, the courſe is weſtnorthweſt 4 leagues.
From the Iſland Arr, or Koping, to the Roen, the courſe is weſt and by north 5 leagues.
From the Roen, to the little Iſland Areu, weſtnorthweſt 3 leagues.
From Areu to *Apenrade* ſouth and by weſt 5 leagues.
From the river of *Apenrade* to the Strait of Sonderburge 3 leagues.
From *Sonderburgh* to the Sley, ſoutheaſt and by eaſt 4 leagues.
From the ſouth end af Langeland to Femeren, the courſe is ſoutheaſt and by eaſt 8 leagues.
From the Pools-riffe, lying on the Iſland Aelſt to Femeren, the courſe is eaſtſoutheaſt 13 or 14 leagues.
From the Sleye to the Kiel ſoutheaſt 4 leagues.
From Kiel to Femeren, the courſe is eaſt & by north 8 leagues.
From Femeren to the Trawe of Lubeck ſouthſouthweſt 9 or 10 leagues.
From the Trawe of Lubeck to Wiſmer-deepe, the cours is firſt northeaſt & by north and then eaſtnortheaſt in all 9 leagues,
From *Roſtick* to *Robbenes*, the courſe is northeaſt 4 leagues.
From Robbeneſſe to Doornboſch northeaſt and by eaſt 7 leagues.
From Femeren to Wiſmerdeep, ſouthſoutheaſt ſeven leagues.
From Femeren to *Roſtick*, eaſtſoutheaſt 8 or 9 leagues.
From Femeren to Geſter-riffe eaſt & by north 9 or 10 leagues.
From the Trave of Lubeck to Geſter-riffe northeaſt 19 leagues.
From Wiſmerdeep to Geſter-riffe northnortheaſt 12 or 13 leagues.
From Roſtick to Geſter-riffe the courſe is north 7 or 8 leagues.
From Geſter-riffe to Doornboſh eaſt 9 leagues.
From Geſter to Meun northeaſt 7 leagues.

How theſe Lands doe ſhew themſelves at Sea.



Thus ſheweth the Land of Eyderſtee to the northwardes of the Eyder.



Thus ſheweth the Iſland Ameren.



Thus ſheweth it ſelfe the Iſland Silt, when you ſayle alongſt by it.



Thus ſheweth the Land of Zuyder-zyt to the ſouthwards of the Doodenbergh.

Thus



Thus ſheweth the Land betwixt the Horne or Doodenbergh and the Haven of Numen.



Thus ſheweth the land betwixt Boevenberghen and the Holmes, when you ſayle alongſt by it, three leagues from the land.



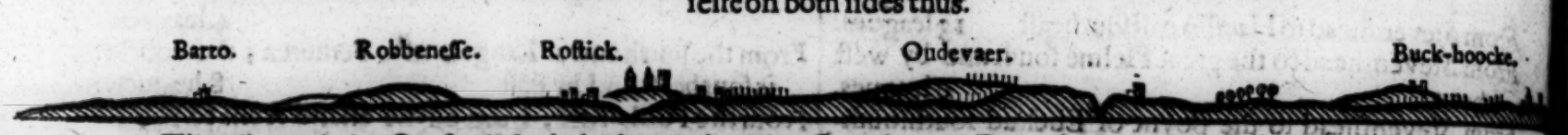
Thus riſeth the Land betwixt te Holmes and the Scaw, when you ſayle alongſt by it.



Thus ſheweth the land and the Church of Aelſt, when you are 2 leagues and a half by eaſt Aelburger-deep.



When you ſayle to Lubeck, alongſt betwixt the Land of Cruyſoort and Holſter land, then it ſheweth it ſelfe on both ſides thus.

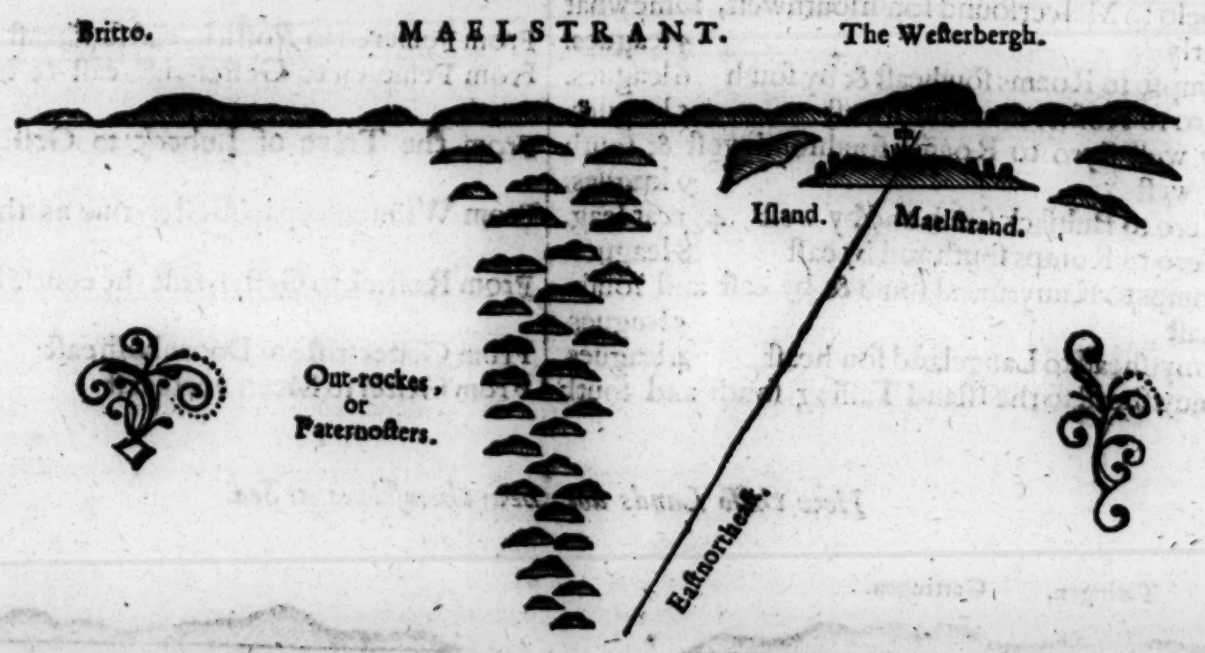


Thus ſheweth the Coaſt of Meckelenburgh, betwixt Cruyſoort & Dorneboſh, or the Jelle, when you ſayle alongſt by it, a league without the Land.

The fourth Demonſtration,

Where in are deſcribed

The Schager Rack, as alſo the Sound from the Paternoſters Kol, and ſo forth through the Sound to Falſterbon.



Paternoſters.

THe Paternoſters are a great rane of Rockes, which lye farre off to ſeawards from the Coaſt, behinde them, to wit, on the ſouth ſide, goeth in within the land a broad ſound, upon the ſouth ſide of it lyeth a great high round rock or hill, called Britto. To the ſouthwards of that ſound lyeth the Iſland of Maelſtrand. He that commeth from the Scaw, and deſired to ſayl to Maelſtrand, let him go on eaſt northeaſt, and then he ſhall get ſight of the foreſayd hill Britto, which he ſhall ſet eaſtnortheaſt from him, & ſayle ſo in right with it, untill that he commeth by the Pater-noſters, he muſt leave on the larboard ſide, and ſayl along by them eaſtnortheaſt, & eaſt and by north, and then he ſhall runne in ſight of the Iſland Maelſtrand, upon which ſtandeth a great ſtony beacon, or Warlock, where ſometimes ſtandeth a maſt with a barrell upon it, and ſometimes alſo there ſtandeth none. You may run in on both ſides the Iſland, either about to the northwards, or to the ſouthwards of it, according as ſhall bee beſt fitting for the wind: If the winde be at weſt or ſouthweſt, then you may beſt run in at the norther channell, or if the winde be at ſouth, or ſoutheaſt, then it is beſt to runne at the ſouther channell. The norther channell lyeth in by the ſouth ſide moſt eaſt and by ſouth, and eaſtſoutheaſt, but the ſouther channell eaſt and eaſt and by north. When you come within the Iſland, you may ſayle about by it, untill you come before the Towne, which you ſhall ſee then lying before you. Men doe anchor



Pascaarte vant SCHAGER-RACK vande Pater-noſters aen Kol. als mede de Sondt, oock hoe deſe landen van Schagen gelegen zyn.

SVE: DEN

SCHAGERRACK

HALLA

Helmſte

Tuylo

Valckenborgh

tLandt van waerſbergen

Noord-ooſten

Murmringe

Bahuis

Elſborch

Monſterſont

Conſhack

Wmuiden

Kongel

Ruſſont

Caſſont

Maeſtrant

Tgat van Bahuis

Tgat van Maeſſont

Maeſſont

Tgat van Monſterſont

Nyng

Rif van Anout

Anout

Noorder gat van Maeſtrant

Noorder gat van Maeſtrant

Patternoſters

Trindel

Koopergrond 12 voet diep

Leſou

Dwalgronden

Clayne Holmen

Holme

Dee

Leeſou

Siwyne hoeden

Elſenburg

Xagerby

Dyrefandt

TLANDTTE

SCHONEN.

ZEE LANDT

Elbogen ofte Malmogen

Schoner ofte oude Valsterbon

Drelborgh

Barsebeec

Landskroon

Engelholm

Raa

Elsenborgh

Wisby

De Spade

Ween

Southolm

Noortvliet

Zuydvliet

Vißcher

Ton op Casper Caniel

Ton op Draker

Draker

Spital

Schoonehoft

Coppenhaven

Elsenaeur

t'Slot van Croonenburch

Het Bosch

Kraeyop

Koi

Kuyck

Roskild

Roskild fiord

Isensioerd

Nicopen

Haselin

Leegs gronde

Barsebeeck

Noort vliet

Zuyt vliet

Southolm

Vißcher

Ton op Casper Caniel

Ton op Draker

Ween

Middel gront

Draker

Reef sol

Schoonehoft

Spital

Copenhaven

Het Bosch

2 Duytsche mylen

De
SONDT
met alle
syn gelegentheyt
int groot.

Schoner ofte oude Valsterbon



anchor there with an anchor to ſeawards out a head, and make faſt a cable out a ſtearne on the kaye, lying ſo with the ſtearne to the ſhoare.

*A*bout the middeſt, going in at the ſouther channel, lyeth a rock above water, which you may ſail about on both ſides, but within that rock lyeth a ſuncken rock under water, and to the ſouthwardes of it alſo a great rock, but a little further out then the other. There lyeth alſo a ſuncken rock under water by the Iſland on the north ſide of the foreſayd rock, which lyeth above water, which men muſt be very carefull to take heed of. There is every where good anchor ground. From thence you may ſail through within the rocks to Calf-ſound, Bahouſe and Nilus.

Calf-ſound.

Calf-ſound lyeth diſtant from Maelſtrand about foure leagues. For to ſail in there out of the ſea, you muſt run alongſt to the ſouthwards of a great rock, whereupon ſtandeth a Warder. On the ſouth ſide of the Havens-mouth there are great rocks, but on the north ſide all ſmall rocks. When you come within the rocks about the poynt of the north land, there you may anchor in fifteen or ſixteen fathom, there is good anchor ground. From Calf-ſound you may run up to the ſouthwards, through within the rocks unto the river of Nilus.

Four leagues ſouthſoutheaſt from Calf-ſound, lyeth the Iſland Winneu, to the ſouthwards of it goeth in the channell of Nilus or Gottenbergh, which is a large and broad ſound, lying in northnortheaſt, in 8, 9, and 10 fathom, you muſt leave Winneu on the larboard ſide, and runne in betwixt the poynt of the main land, called Kalderhead, and the Iſland little Denmarck, and then in alongſt by the main land on the ſouth ſide untill paſt Elsburgh to Gottenburgh, it is there all cleane and cleare without any danger that might hurt you.

Gottenburg.

You may alſo ſayle into the northwards of Winneu, then you muſt leave Winneu, and alſo ſome long rocks on the ſtarboard ſide, and the through Iſland, or little Denmarck, on the larboard ſide, and then in alongſt by the poynt of the mayn land, on the ſouth ſide, as is before ſaid.

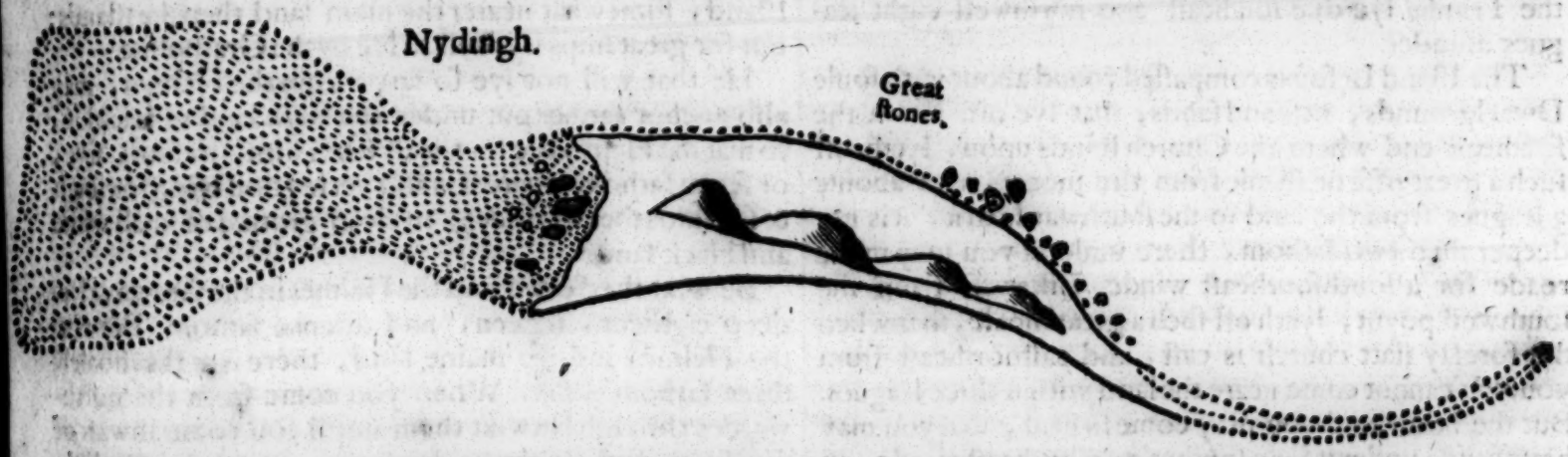
Three leagues ſouthſouthe. from Winneu lye Maelſound and Conſback: Maleſound is a rough Iſland, which you may ſayle round about in ſeven or eight fathom, under it is alſo good road. Two cables lenght weſtnorthweſt from Maleſound, lyeth a ſuncken rock under water, and alſo one even with the water, a bow ſhot from the land, whereupon ſtandeth a Warder. Maleſound.

Eaſtnortheaſt from Maleſound lyeth the haven of Conſ-back, there ſtand 2 great Wardes, each upon a rock cloſe to the land, betwixt them lyeth in the haven, it is a fayre haven, ten fathom deep, and good anchor ground, when you come about the low poynt you ſhall ſee Conſ-back lye to the northwards of you. Conſ-back.

From Maleſound ſouthweſt and ſouthweſt and by weſt, a great league to ſeawards, lyeth the fowle and dangerous rock Nyng or Nijding: The land upon Nyng is about a halfe league long. The riffe on the north end runnes till about a league on the land northeaſt, and is a halfe league broad, wholy riffe, with ſharpe ſtones. Upon ſome places eight, ſeven, five, and foure foot water. The taile, which ſhooteth ſoutherly downe, is narrow, and runneth from the land northeaſt about 2 leagues: There upon is 5, 4, and 3, foot water. A league and a half without Nynger-*Riffe*, northweſt, men may ſtay upon 6 and 7 fathom. You may ſaile through betwixt Nyding and Maleſound, or the mayn land, but it is there all ſhallow water. Upon Nyding is a fire-beacon, whereupon they make fire every night. Nyding.

From Nyding to Waterſbergen the courſe is ſoutheaſt 5 leagues, betwixt them (three leagues to the ſouthward of Maleſound) lyeth Monſterſound, that is a river or Sound, which runneth up into the land, upon it lye ſome towns as Vlymenes, Horn, and Goſewater. From Monſterſound 3 leagues to the ſouthwardes, lyeth Waterſbergen. For to ſayl in there, you muſt run in by the eaſt land. At the poynt of the Iſland which lyeth on the northweſt ſide before the haven, lyeth a rock under water, and from the poynt where the caſtle ſtandeth upon, lyeth alſo a ſuncken rock, both which you muſt avoyd, and therefore run in amidſt the channell, betwixt Monſterſound. Waterſbergen.

Nydingh.

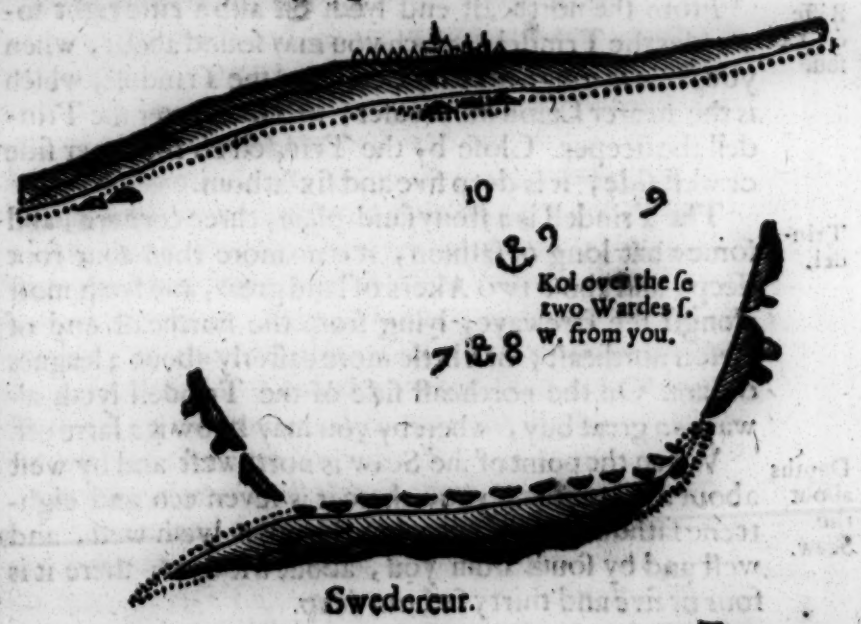


the foreſayd Iſland and the mayne land, where the caſtle ſtandeth upon the poynt, and anchor when you come within the poynt right againſt the caſtle in 4 or 5 fathom. For to ſaile into Waterſbergen by markes, you muſt bring Old Boey to the north ſide of the caſtle, and goe on northnortheaſt, there lieth a rock even with the water, which you muſt leave on the ſtarboard ſide, and anchor right againſt the caſtle in 4 or 5 fathom as before is ſaid.

Three leagues to the ſouthwards of Waterſbergen lyeth the river of Valckenburgh. On the north ſide of the Riversmouth lyeth an Iſland, called Murupting, and 3 leagues to the ſouthwards of it, lyeth an Iſland, called Tullo, betwixt that Iſland and Valckenburgh, within the land, lyeth a high hill, called Haver, being white to ſe to, as if it were ſandy Land: ſea faring men doe name it yong Coll, becauſe of the likenesſe of height & faſhion, which it hath like Col, and ſometimes it is miſtaken for Coll.

Three leagues eaſtwards from Tullo, lyeth Helmſtee upon a river, but there can go in no ſhipps, but onely huyes and boates.

Thus river of Helmſtee lyeth within a greate Inlet about ſouthſouthweſt 4 leagues from Swedereur.



Swedereur.

Laholm. Two leagues ſouthwards from Helmſtee lyeth the little towne, or little caſtle, called Laholm, there goeth alſo a little river into the land. *A* league weſtwardes from Laholme lyeth Bosſtadt, theſe places lye in a great bay.

Swedereur.

Three leagues to the weſtwardes of Bosſtadt lyeth the Iſland Swedereur, you may runne in behind it at both ſides, for to anchor from the northwardes, it is there large and broade for to go in: but from the north end of Swedereur ſhooteth off a little ledge of rocks, you muſt runne alongſt to the northwards of the rocks, that lye at the north end of Swedereur leaving them on the ſtarboard ſide, and anchor behinde the Iſland, betwixt the greate and little rockes in ſeven fathom, thwart of the little white Church of Turcko, ſo that the greate rock with the two wardes at the ſouth end be ſouthweſt from you, and Col ſtand over the foreſayd *Rock*, there it is beſt lying, and there you are landlockt for all winds. If you wil run out again to the ſouthwards of it, then leave the two rocks with the Wardes on the ſtarboard ſide, and runne boldy cloſe about by them, towards Coll.

Hee that commeth off from Anout, & by reaſon of ſoutherly windes cannot run a weather Coll, let him goe from Col northeaſt and by north towards *Swedereur*, and runne cloſe about by the two foreſayd rocks with the Warders, at the ſouth end of Swedereur, untill he come behind the Iſland, and anchor, as is before ſayd, there it is ſoft ground. A north wind bloweth there open in.

Coll. From *Swedereur* to Coll the courſe is ſouthweſt and by ſouth, betwixt both lyeth a greate baye, upon which lyeth that little towne Engelholme, where men alſo may ride.

For to ſayle from the Scaw to Coll.

From the Riffe of the Scawe to the Iſland Leſou the courſe is ſouthſoutheaſt, but the poynte of the Riffe and the Trindel lye due ſoutheaſt and northweſt eight leagues aſunder.

Leſou. The Iſland Leſou is compaſſed round about with foule Dwaelgrounds, riffs and ſands, that lye off. From the ſoutheaſt end where the Church ſtands upon, lyeth off ſuch a great riffe or ſhoale from the ſhoare, that aboute 3 leagues from the land to the ſouthwards of it, it is not deeper then two fathom, there under it you may make roade for a ſouthſoutheaſt winde. Likewiſe from the ſouthweſt poynt, lyeth off ſuch a great ſhoale, that when the foreſay flatt church is eaſt, and eaſtnortheaſt from you, you cannot come neare the land within three leagues. But the north end you may come ſo near, that you may have roade under it for a ſoutherly & ſoutheaſt winde, in three, four, five, ſixe and ſeven fathom, the church being about ſouth from you.

Riffe of Leſou. From the northeaſt end lyeth off alſo a riffe right towardes the Trindel, which you may ſound about, when you ſayle through betwixt Leſou and the Trindell, which is the nearer Leſou the ſhoaler, and the nearer the Trindell the deeper. Cloſe by the Trindell on the Inner ſide or weſt ſide, it is deep five and ſix fathom.

Trindel. The Trindell is a ſtony ſand-plate, three cornerd, and ſomewhat long of faſhion, it is no more then four foot deep, and about two Akers of land great, and lyeth moſt alongſt the farewaye, lying from the northeaſt end of Leſou northeaſt, or a little more eaſterly about 3 leagues diſtant. On the northeaſt ſide of the Trindell lyeth alwayes a great buy, whereby you may know it a farre off.

Depths about the Scaw. When the point of the Scaw is northweſt and by weſt about a league from you, there it is ſeventeen and eighteene fathom deep, but when the poynt lyeth weſt, and weſt and by ſouth from you, about a league, there it is four or five and thirty fathom deep.

But he that commeth ſayling about the Scaw, and runneth without the riffe in tenne, eleven, or twelve fathom, and goeth on from thence ſoutheaſt, or ſouthſoutheaſt, keepeth a long while ſtill the depth fifteen & ſixteen fathom, at leaſt the ſpace of three leagues, before he get twenty, or five and twenty fathom. When as that you beginne to get againe ſhoaler water of tenne, eight, ſeven, and ſix fathom, that goeth then through within the Trindell. When as you ſhall meete with the foreſaide depth of the ſhoaling, and ſaile yet further on ſouthſoutheaſt, then you muſt be very carefull to uſe your lead often, becauſe of the foreſaid ſhoale, which lyeth off from the northeaſt end of Leſou towards the Trindell, you may runne over it (as is ſaid) in five, foure, and ſo well (in the narrowe) in three fathom. When the northeaſt point of Leſou beginneth to come ſouthſouthweſt from you, then you come on againſt the riff or ſhoale, but when the poynt is ſouthweſt from you, then you are over the ſhoaleſt of the riffe. When the weſt end of Leſou is ſouthweſt, and the church ſouthweſt and by ſouth from you, then you are about thwart of the buye of the Trindell.

The Helmes. Four leagues ſouth and by weſt from the Scaw lye the ſmal-Helmes, not far from the ſhoare, there are three little Iſlands, the ſouthermoſt the Juttes doe call the Deynen or the Dee, the midlemoſt Holmes, & the northermoſt Graſholme, by them lieth yet another little Iſland. You may ſaile through betwixt the ſouthermoſt & the middlemoſt, but then you muſt runne neareſt the ſouthermoſt, through betwixt them is four fathom water.

Under the Helmes is good road for ſoutheaſt, ſouthſoutheaſt & ſoutherly windes. He that will go to anchor under them, comming from the Scawe, muſt runne to the ſtrand in three fathom, and runne ſo alongſt by it, in betweene the ſtrand and the Helmes, untill that he be within the rockes, there he may anchor, he may alſo well runne through alongſt by the footſtrand in 3 fathom. When the rockes of the Helms are eaſt, & eaſt & by north from you, there is the road in 4 fathom & 4 fathom & a half. The beſt road for to ly under the Helms with ſmall ſhips, is betwixt the ſouthermoſt & middle moſt little Iſland, ſomewhat nearer the main land then the Iſlands: but for great ſhips it is beſt to lye by the Graſholme.

He that will not lye ſo farr within the Helmes, may alſo anchor farther out under the high land of Lacklou, ſo that the Helms bee ſoutheaſt from him, in four, five, or ſeven fathom, there it is alſo verie good lying for ſouth & ſouthſoutheaſt windes, in clean ground of ſmall white and black ſand.

Betwixt the *Scawe* and the Helmes in the farewaye it is deep eighteen, ſixteen, and fifteene fathom. Betwixt the Helmes and the maine land, there is at the ſhoaleſt three fathom water. When you come from the northwardes through betwixt them untill you come thwart of the ſouth end of the rockes, there runneth off a little riffe from the Helmes towards the ſtrand, where the greate ſtones lye called Bourſer riffe, but keeping in three fathom, you cannot take hurt of that riffe. You may well run out againe by that ſouth end towards Zeabuy. So that you may ſayl round about the Helmes with ſhippes that are not of very great draughts.

Betwixt the Helmes and Leſou, a good wayes from the Helmes, it is 20 & 27 fathom deep, ſoft ground, but one league from the Helms lye ſome rocks or ſhoals, where of you muſt take heed.

To the weſtwardes of Leſou lye the Dwaelgrounds, to the northwards of the foreſaid riff, that lyeth off from the ſouthweſt point of Leſou, where the flat church ſtandeth upon. Which are very uneven of three, four, five, and ſix fathom deep. Of theſe and more other ſhoals & uneven groundes betwixt Leſou and *Zeabuy*, reade the deſcription off the norther part of the Belt.

About a league northnorthweſt from the weſt end of Leſou, ſouthſoutheaſt ſomewhat ſoutherly from the point of the Scaw, & eaſtſouthe. from the little Helmes, there

there lye two or three little low Iſlands or rocks, a little above water; betwixt theſe Holmkens, and the Helms, it is twenty fathom, but betwixt theſe Holmkens and Leſou five fathom deep, to the northwards of them is farre flat, 4 and five fathom deepe ſand ground.

If you wil ſayl by night off from the Helmes or from the high land of Lacklie towards Leſou with a ſouthweſt or ſouthſouthweſt winde, then ſayle no nearer becauſe of theſe little Iſlands and ſhoals then ſoutheaſt and by eaſt, with that courſe you ſhall run over thoſe ſhoals or flats (lying to the northwards from the foreſayd Holmkens) in ſix or ſeven fathom, afterwards it will be deeper again, nine, ten and twelve fathom, go then on eaſtſoutheaſt ſo long untill that the eaſt end of Leſou beſouthweſt from you. When that eaſt end beginneth to come ſouth and by weſt from you, then you come on againſt that flat, or rif, which ſhooteth off from the northeaſt end of Leſou towards the Trindell. It doth ſhoale up from 14, 12, and 10 fathom, unto eight, ſix, and four, and alſo to three fathom. If you be ſomewhat near to Leſou, three fathom laſteth a good whiles, and then it wil be again deeper, four, ſix, tenne and fifteene fathom, and then verie deep. When that foreſayd northeaſt end of Leſou is ſouthweſt from you, then you are cleare of that flat. The Helmes and the Trindel lie eaſt & by ſouth and weſt and by north ſeven leagues aſunder.

When you come from the Scaw with a ſouthweſt or weſtſouthweſt winde, and that you will ſail trough within the Trindel, that is, betwixt the Trindel and Leſou, it is beſt that you goe ſuch a courſe, that you may make your wayes good ſoutheaſt and by ſouth, and then you ſhall run alongſt about the middeſt of the channell, trough betwixt the Trindel, and the foreſayd low rockes, (which lye northnorthweſt off from the north poynt of Leſou, and ſouthſoutheaſt from the poynt of the Riff of the Scaw.) At the deepeſt in this farewaye, betwixt the Scaw and Leſou, it is 23 and 24 fathom, being paſt over that, you ſhall come againſt a banck of eight, ſeven, and ſix, and alſo into five fathom, and then you ſhall be about due weſt, or a little more northerly or ſoutherly from the buye upon the Trindel. Afterwards it wil be again deeper, if you be in the right fareway, to witt, ſeven, eight, ten, and alſo wel twelve fathom.

Not for to ſayl within the riff, or the northeaſt poynt of Leſou, it is good to run then ſomewhat more eaſterly, to witt, ſoutheaſt or ſoutheaſt and by eaſt, untill you come againſt the foreſayd riff that lyeth off from the northeaſt poynt of Leſou, which you may ſound, and ſo runne about by it in five, four, and alſo three fathom. When the northeaſt poynt off Leſou, (that is the poynt with hommocks) is ſouth & by weſt from you, then you come againſt the rif, & when that poynt is ſouthſouthweſt from you, then you are right thwart of the rif, but when the poynt is ſouthweſt from you, then you ſhall be paſt and cleare of the rif. Being gotten about it towardes *A*noute, it will be deepe thirtie, five and thirtie, and alſo 40 fathom.

He that commeth by night about the Trindell, muſt not ſpare his lead, on the outer ſide, that is on the eaſt ſide of the Trindel you may not come nearer it by night, then nine or tenne fathom, and then you ſhall not be farre off from it.

When you ſayle cloſe alongſt without the Trindell in cleare weather, and that you ſtande without board, upon the bendes of the ſhippe with your feet by the water, then you can even ſee Leſou. If that then in cleare weather ſtanding ſo without the ſhip, you cannot ſee Leſou, when you are about thwart of the Trindel then you runne farre enough alongſt without the Trindel.

The Trindel and the riffe of Anout lye northweſt and ſoutheaſt, or as ſome ſay ſouthſoutheaſt and northnorthweſt nine or tenne leagues aſunder. Betwixt Anout and Leſou in the right farewaye it is five & twentie fathom deep, but to the weſtwards of it, to wit, right betwixt the Iſlands *A*nout and Leſou it is ſhoale water, of ſeven and eight fathom, you may ſayle there over theſe flats and ſhoals trough betwixt *A*nout and Leſou into the Belt.

Anout is upon the weſt ſide verie foule, and farre off to ſeawards from it, lye manie uneven dwaelgrounds of two, three, and 4 fathom.

When you ſaile with a ſouthweſt or weſterly winde from Leſou to Anout, and runne over the flat of Leſou in three or four fathom, you neede not ſayle on more eaſterly then ſoutheaſt and by eaſt, although it be by night, you ſhall with ſuch winde and courſe run cleare enough off Anout. When as that you reckon to have the length of the riffe, goe then on ſouthſoutheaſt, and ſouth and by eaſt, for to ſail a wether of Coll. But by day or when you can ſee about you, not more leewardly then ſouthſoutheaſt. When you ſaile off from the foreſayd pointe of Leſou to *A*nout, with a ſouthweſt or weſtſouthweſt winde, as is before ſaid, & make reckoning to come by night by *A*nout, then you can not doe better, as to goe eight, tenne or twelve glaſſe, (according as the winde ſhall blow freſh) on ſouthſoutheaſt, untill you come againſt the ſhoaling of *A*nout, and looke for the daye, that running not to far to leewards off the poynt of the riffe, you may the better gett a weather off Col. Likewiſe, when you come off from Col with a ſouthweſt or ſoutherly winde, and runne about a halfe league alongſt without Coll, you neede not alſo ſaile more northerly. then northweſt and by north, that goeth alſo a good waye alongſt to leewards of Anout riffe, and ſo forth towards Leſou. But when you come with a northeaſt wind out of the Sound, or from Col, you muſt runne out cloſe by Coll, if you will ſail a weater of the riffe of *A*nout.

He that muſt lye by or turne to windwardes betwixt Leſou and *A*nout, and is bound for the Sound, let him keepe himſelfe on the weſt ſide of the farewaie, when he is a league or two a weather of Leſou, upon thoſe foreſayd flattes, or foure, ſixe, and ſeven fathom, when as that he beginneth to come within a league or two of *A*nout, there it will be again deeper, but uneven the one caſt at leaſt a fathom more or leſſe then the other, when that you ſhall begin to get that uneven ground of ſixteene, twentie, and alſo thirtie fatom, then is *A*nout yet about three leagues ſouth from you; comming neare Anout it wil be verie uneven, at one time thirtie, and then ſoone againe fifteene, ſeventeene, & alſo twinty fathom.

If you will ſayle towards Leſou with a ſouthweſt winde, comming about the Riffe of *A*nout from the ſouthwardes, then goe not on more weſterly then northweſt. If you goe on more weſterly, eyther weſtnorthweſt, or northweſt and by weſt: then you ſhall come ſoon upon the flatte betwixt *A*nout and Leſou, and ſhal finde firſt tenne, and then by little and little ſix, five and four fathom. When that with the northweſt waye you beginne to gette Leſou in ſight, then it lyeth high, that is, the weſt end about weſtnorthweſt, and the northeaſt end, where the riffe lyeth off, about northnorthweſt from you. When you come ſo neere to Leſou, that you can ſee the eaſt end out off the toppe in cleare weather, about northweſt from you, there it is thirtie, and four and thirtie fathom deep, that laſteth ſo long untill that the foreſayd eaſt poynt be ſouthweſt from you, but when that poynte is ſouthſouthweſt from you, then you are right thwart or upon the poynte or ſhoaleſt, of the riff, then you ſhall runne over there in three, four, and five Fathom: when that foreſayd poynt commeth to be ſouth and by weſt from you then you are paſt and cleare off the riffe. Depths by Leſou.

Betwixt *A*nout and Waeſbergen in the farewaye it is deepe one and twentie, two and twentie, and three and twentie fathom, betwixt them lyeth alſo a banck off ten, twelve fourteene and ſixteene fathom. When the northermoſt high hill of Waeſbergen is northeaſt Depths thwart of Anout.

from you, then the poynts of Anouts riffes are southwest from you: but when that hill is northeast and by east from you, and that you be somewhat nearer Norwaye then the riffe, then you are upon that banck. When you come upon it by night, then goe on south; or south and by east, according at the winde shall bee, & then you shall get againe deeper water. There lyeth yet another banck betwixt the riffe of Anout & Valckenburgh, which lyeth alongst unto Haland, which at some places is not deeper then eight fathom. When the poynt of the riffe is about south and by east, and the high land of Anout is about south and by west from you four leagues, there lyeth also a banck of 14 or 15 fathom.

Riffe off Anout.

The riffe of Anout lyeth off from the northeast poynt of Anout about eastnortheast a league and half into sea, and at the end lyeth drye above water, which is exceeding steepe and needle too. The north side (when you come from the northwardes or the westwardes) you may sound, and runne alongst by it, in seventeene or eighteene fathom: but comming from the southwards, you cannot (in no wise) come neare it by your lead, for on the south side close to the Rifte, it is thirty, and five and thirty fathom deepe.

Road under Anout riffe.

On the north side of the riffe, you may anchor at many places in ten, eleven, twelve, and thirteen fathom. When you anchor in eleven, twelve or thirteene fathom, so that the firebeacon be southeast and by south, and the high land of *Anout*, which is the west end, about southwest and by west from you, then lyeth the outermost end of the riffe east & by north from you, there is verie good lying for eastsoutheast, southeast, south, and southsouthwest windes. When you set sayle from thence, & are bound to the *Sound*, then you may boldly without feare (either by night or darke weather) sayl alongst by the riffe in sixteen, seventeen, or eighteen fathom, untill thwart of the end, keeping in such depth you can take no hurt of it. Comming by the end, it is four and twenty and five and twenty fathom deepe, but when you come about the poynt, and beginne to goe on southsoutheast, then you have presently close to the riffe no ground in thirty and five and thirty fathom. The riffe of Anout and Coll lye one from the other southeast and northwest about ten leagues asunder. In cleare weather you may easily see from belowne both Coll and Anout, when you are betwixt them both. *For* to sayle from the riffe to the Sound with a west southwest winde, you need not sayle nearer with a ship that sayleth wel, then southsoutheast, with that course you shall sayl farre enough a weather of Coll. Comming neare the Coast of *Zealand*, that you may sound in fourteene, twelve, tenne & eight fathom deepe.

Depths betwixt Anout riff & the Sound.

Betwixt *Anout* & Zealand, in the farewaye it is eightteene and twenty fathom deep. Betwixt Anout and *Zealand* fifteen and sixteen fathom, but in the farewaye betwixt Anout and Coll, it is deep twenty, one and twenty, two and twenty, & three and twenty fathom. To the southwards of the westwardes of it, it is shoaler, to witt, nineteen, eighteen, and also well fourteen, thirteen, and twelve fathom, according as you come to the westwards, but towardes Norwaye it is deeper, to witt, four and twenty, five and twenty, eight and twenty, & also thirty fathom, whereby you may perceive whether you be neareſt the Norway side to the eastward of the fareway or to the westward.

Divers bancks

About northwest from Coll four leagues, and southeast and by east from *Anout*, there lyeth a banck of nine, tenne and twelve fathom.

About east and by south from Anout, so far that you cannot well see it from beneath, but may see it out of the top, and northwest from Coll, there lyeth also a banck of sixteen fathom, grosse sandy ground, as if it where ground of the riffe.

South and by east about eight leagues from the poynt of *Anouts* riffe, southeast and by south from the south end of *Anout*, and west and by north from Coll about five leagues, lye the Lowsegroundes, upon which is no more then eight foot water. He that commeth off from Anout riffe, being bound for the *Sound*, and goeth not more southerly then southsoutheast, shall not sayle within these grounds, but with a south & by east course he should fall with them. He that commeth out of the *Sound*, being bound towards *Anout*, shold (with a westnorthwest course off from the *Sound*) also sayle within the same, therefore he that is bound with a bare winde from Anout to the Sound, or from the Sound to *Anout*, must be carefull thereof.

Lowse-ground

The Island Haselin lyeth from *Anouts* riffe south 11 leagues distant, and from Coll southwest & by west eight leagues, which is on the north side, or outer side very full off riffes and shoales, but on the south side or inner side towards *Zealand* it is indifferent clean, so that you may well have roade there. From the east end of Haselin lyeth off a Riffe northnortheast and northeast and by north towardes Norwaye three leagues into sea, untill within a league near to the Lowsegrounds he that must turne to windewardes here, with southerly or northerly windes, and runneth somewhat far over westwardes into the bay, must be very carefull, and take heed there of, because it is there abouts very uneven of depths, & uneven grounds, and therefore you cannot well come neare then by your lead; but the Coast of Zealand you may come neare in 6 or 7 fathom by your lead.

Hasselin.

Lappesand.

If it should happen that you must lye by, in the Scawe reach in long darke nights or mistie weather, then observe these directions following: If you be betwixt the Scawe & Lesou, then you may keepe your self well bouldly to the southwards or westwards, but use the lead much: about the Helmes and the Scawe you may come neare the shoare into ten, twelve or fifteene fathom, before you need to cast about. If you be by your reckoning thwart of Lesou, you may come neare it in ten or fifteen fathom: But if you be betwixt Lesou and Anout, there you may runne upon the flats in five, six, seven, eight or tenne fathom. If you be betwixt *Anout*, Haselin and Coll, there you may runne to the south shoare in fifteene and sixteene fathom, but betwixt Haselin and *Zealand* in ten or twelve fathom.

Depth in the Sowe reach.

It is best in anie wise to keepe you rather to the south shoare, then to the Norwaye side, but you must be verie carefull of your lead, and use it verie much.

Swineboden.

From Coll to the Island Haselin, it is southwest and by west eight leagues, you may sayle through betwixt Haselin and Zealand, untill you come into the Belt: the coast of *Zealand* is a faire strand, but betweene Fishers village and the Castle Kronenburgh, lyeth a banke a little halfe league from the shoare of two fathom, and runneth with a riff to the shoare and is foure fathom water, as also, to the westwards of Haselin, there shooteth off a riffe to seawards, which you must avoyd.

Hasselin.

For to avoyd Lappesand.

About eastsoutheast from Haselin goeth into the Land a great broad sound, which without at the entrance of it, is a great league broad, there is good anchoring for a northwest winde, in five or six fathom. The Sound divideth it selfe within the land into three parts, the first or the eastermost, called Roskildifiourd, goeth up southsoutheast unto Rockil, the second, called Isenvoort, lyeth into the land south, and south and by west at least 5 or 6 leagues, unto Isickby and Holbeck: within it is at least two leagues broad, and in the middest lyeth a great Island. The third lyeth to Draeckfholme, also at least five leagues southwest, and northeast, like the coast towards the Belt. The Coast of *Zealand*, betwixt Haselin and the Sound is a clean coast, you may sayle alongst by the Land in six or seven fathom, besides the foresayd riff which lyeth betweene Fishers village there is upon it but four fathom deep, but come no nearer to it by night then twelve or thirteene fathom, for at some places it is steep, and shoaleth up suddenly. Where that little new Church standeth, thwart of it, it is flat three and foure fathom, and to the westwards of that wood which standeth

Hasselin.

For to fall out of the Sound.

deth to the westwards of Lapsand, you may come in foure fathom by the shoare, without taking hurt, but comming neare Lapsand, you must keepe further off from the shoare, in seven or eight fathom, or els you should get behinde the poynte of Lappesand.

Lappesand lyeth about an English mile to the northwards of Elsenoore, or the Castle of the Sound, lying on the west side of the sayle way, alongst the coast of Zealand. For to avoyd Lappesand you must be carefull of these marks, there standeth a house to the westwards of the Kings mill, to the westwardes of the Castle of Cronenburgh, keep the Chimney of that house to the westwards of the front of the Kings mill, and then you can take no hurt of Lappesand, then runne alongst by it in six, seven or eight fathom, so long untill that the east end of the Island Ween commeth a little without the castle of the Sound, keepe that so standing, and sayle so in sixe or seven fathom, somewhat close alongst by the castle, you may playnly see lying through the water all that can hurt you.

Lappesand.

For to anchor behinde Lappesand.

If you will shift roads out of the *S*ound, & anchor behinde Lappesand, then sayle thwart of the foresayd Kings house called the Caux or Kings mill, so that it doe stande about south or south and by west, or south and by east from you, anchor there in six, seven or eight fathom, there it is good lying out of the current and sand ground: but if you will anchor in twelve, thirteen or fourteen fathom, there it is soft ground, and there goeth a strong current with southerly or southeast windes, but you lye there better, in more roome, for to sayle inwardes againe, if it should happen that the winde did suddenly shift out to the northwest. It happened once to one of may acquaintance, that had anchored somewhat to the eastwards of the Kings-mill, in sixe or seven fathom and the winde did shift in the night to the northwest, when they weighed thier anchor the shippe fell towards the land, & before they could get the ship about before the winde, they did runne in three fathom over the poynt of Lappesand.

*F*rom Coll to Elsenoore or the *S*ound, the course is southeast, & southeast and by south four or five leagues. About halfe wayes betwixt Coll and Elsenburgh lye the Swyne boden, which are some foule rocks, and suncken rokes, which lye off to seawards a good wayes from the land, but when you sayle towardes the Sound comming from Coll, then keep the Island Ween hidden behinde the Bastle Cronenburch, and then you cannot sayl foul of the foresayd Swyneboden, when that you are past them, and runne in amidst the channell, for to avoyde Lappesand, or els if you bring the east end of Ween, the again right without the castle, or keepe in seven or eight fathom from the *S*ealands side, you can not take hurt of Lappesand, when you are come within the castle, you may anchor where you please. The shippes doe commonly anchor all alongst by the land untill to the southwards of Elsenore, there it is fifteen & sixteen fathom deep, but with a southeast winde it is bad lying there.

Swyneboden.

For to avoyd Lappesand.

Towards the Island Ween lyeth a banck of eight or nine fathom, it is better lying there, but it is somewhat farre from the land.

When you will sail out of the Sound towards Coll, & are come to the end of Lappesand, then goe northwest, and by west for to avoyd the *S*wyneboden, untill that Coll be northnortheast from you, then goe boldly northwest and by north, or northnorthwest, according as the wind shall be, for with a northeast winde, you must runne out northnorthwest very close alongst by Col, for to sayl a weather of the Riffes of *A*nout and Lesou.

For to sail out of the Sound.

For to sayle to Elleboge or Malmuyen, and Landscroone.

If you will sayl out of the *S*ound to Elleboge or Malmuyen, goe from Ween southeast and southeast and by south, and then you shall see the steeple or the towne lying before you, sayle towards it, in that farewaye, it is most seven or aight fathom deepe: when you come within the south Holmes, it wil be five or 6 fathom deep, it doth shoale up suddenly, from the seven fathom to five, but before the towne it is shoaler water, you may anchor there in three, four or five fathom if you will; you may lye also at the end of the Head, in three fathom, there it is good lying, but with a northwest winde it is a bad roade, for it bloweth there open in.

If you will runne out agine to the southwards of the south Holmes towards *F*asterborne or Steden, you must take heed of the south Holmes, wich are foule round about. *F*rom the north end shooteth off a riffe a great wayes: Upon the east side, at the south end, it lyeth very farre off shoale, there lyeth also the Northvliet, that is a ledge of rocks under water, but you may perceive it through the water, you shall leave it on the south Holmes side, to witt, on the starboard side of you: but the Southvliet, which lyeth thwart of Old *F*asterborne, you shall leave on the larboard side, & so runne through betwixt them, it is in that farewaye at the shoalest four fathom deep. When you come off from Malmuyen, and that the steeple of Coppenhaven come to the south end of the *S*outh Holmes, then you are past the Northvliet. When you sayle thus there through, you must be very carefull to avoyd these foresayd grounds. You may runne out also alongst by the strand of Schoonen, and leave both the Northvliet lying on the starboard side: you may sound that strand in four and five fathom, as also the riffe of Fasterborne.

Northvliet.

Southvliet.

He that will sayl into Lands-croone, must know that there lyeth a shoale before the havens mouth, and must runne in about to the southwardes of it: there standeth a little Church on the north side, by the water side, and a Gentlemans house somewhat farther within the land, bring that church over the house, and then you are cleare of the shoale, then saile in right with the poynt, and anchor there in three fathom.

Landscroone

To the northwards of old Fasterborne goeth in a deepe, called Hull or Hulwater, it is a deepe haven for ordinarie ships, which goeth in most northeast in three or foure fathom; you may sound it in alongst by the footstrand of old Fasterborne in three fathom, leaving old Fasterborne on the starboard side, it is there large & broad enough.

Hulwater.

How men shall sayle out of the Sound, trough the shoales or grounds, and into the Reefshol.

He that will sayle out of the Sound towardes the shoales or Groundes, let him goe on south and by east, or he may sound alongst by the wood, in five or sixe fathom, and then he shall not sayle a misse of the norther buye, for it leyth in five or six fathom, on the north end of the Middle-ground, to the eastwardes of the buye, it is seven fathom deep, but in the right farewaye thwart of this buye, it is nine or tenne fathom deep: the markes of this buye are, when that end of the wood is westsouthwest from you, then you are thwart of the norther buy, and there standeth then a flat steeple, a prettie wayes to the southwards of that wood: there commeth also three hommocks to the north side of the town, these are all marks of the norther buye.

Norther buye.

From the Norther buy to the Middle buye, the course is south and by east. When you come by the Middle buye, then commeth the southermost mill on to the southwardes of the towne of Coppenhaven, and the flat steeple commeth within a handspikes length unto the sharpe steeple, that are the markes of the Middle buye, or second buye in the shoales or grounds, it is here eight and nine fathom deepe.

From the Middle buye to the third, and forth to the buye upon Casper Caniell, the course is south and by

Third buye.

east. When the white castle commeth over the sharpe steeple, they are the markes of the fourth buye, or the buye upon the Casper Caniell, the third lyeth at the south end of the Middleground, it is not there verie broade, but steepe on both sides, the deepe thereaboutes is seven or eight fathom: If you must turne to windewards there, you must cast about, so soone as it doth begin to shoale, as well on the one side as on the other.

Buye upon Casper Caniel. Fisher. The fourth buye lyeth on the north end of Draecker upon the flat, over against it lyeth a rock above water, called the Fisher, east and by north from the buye there you may well sound the south holme, for it is there shoale water. Betwixt the third and this fourth buye commeth running out a channell from Copenhaven, which men doe call Casper Caniell, or the Kingsdeep.

*F*rom the fourth buye or Casper Caniell, to Draker riffe, the course is south, & south and by east: the land off Draecker you may sound in three, four, and four fathom and a half.

Ruff of Draker The Riffe off Draecker lyeth a good wayes without Draker, it lyeth off a halfe league east into sea. The markes off the buye upon Draker-riffe are these. When the steeple of Copenhaven commeth to the southwards of Draker to the wood, then you are thwart of the buye. The shoalest water that you shall finde betwixt this buye upon Draecker-riffe, and the foresayd fourth buye, is five fathom lesse two foot. For to sayl by night through the shoales or grounds, go from the Island Ween south and south and by west, so long untill that you come thwart off the poynt off the wood in four fathom, then keep somewhat off from the shoare, and goe on southeast & by east, untill that you come in seven fathom, and then forth southsoutheast, untill you be over the Middle-ground, the first or northermost buye, as is before sayd, lyeth in five fathom, but you may well goe over to the westwards off it, in three or foure fathom, keepe then somewhat off, untill that you come in eight, nine, or ten and eleven fathom, and sail then on south unto Casper Caniell, there it will be by little and little shoaler, to wit, about eight fathom. Thwart off Draker it is uneven for to sound, the one cast five and the other foure fathom, out go your course, except you knew that you where neerer the one shoare off Draker, or the south holmes, then the other. Without Draker it will be againe 6 and 7 fathom deep. *F*ull southeast from Draecker, about a good halfe league lyeth a stone, three foote under water, and is about 2 rods length from the greate where Cornelis Jansz Buysman, from the streeck in *S*eptember 1628. run upon with his shipp.

For to saile into Riffholl or Copenhaven, comming from the northwards out of the sound; runne along somewhat to the eastwards of the Norther buye, for to avoyd the plate, or Middle-ground, which lyeth to the westwardes of the buyes in the shoals, which upon the north end is not deeper then twelve foote, and on the south end eight, nine, and at some places ten foot deep, all hard stony and rocky ground; keepe the sounding of the shoare on the west side in two, three, or foure fathom, so deep as you please, untill you come before Copenhaven, on that side you can take no hurt, it is there broade and wide, and lyeth in south & by west; in the middest betwixt the shoare and the Middle-ground, it is 5, 6, and 7 fathom deep. If you should turne to windwardes there, then come not neerer the Middleground then in foure fathom, but the west shoare you may runne to by your lead, as you please.

From the north end of the Island Draecker, runneth off a riffe to the northwards, upon the poynt of that riffe lyeth a buye, which men doe call the buye in the Reefsholl, leave that on the larboard side, and run in, untill you come before the towne, and anchor there. If you come from the southwards, and will sayle unto *R*eeffholl, then run alongst to the eastwards of the foresaid fourth buy (which men do call the buye upon Casper Caniell) then luffe up presently about by it, and go on northwest into the Kings-deep, unto the buye in Reefsholl, which lye one from the other due northwest, and southeast: yon shall then also see right out a head, in the northwest within the land a flat steeple right over a great house or Hospital, that standeth close upon the sea-side, keepe them so one in the other, and sayle right in with them, and so you shall runne in right amidst the channell, it is there in the fareway five, sixe, seven, & eight fathom deep. This Kings-deepe is somewhat uneven of ground, therefore be carefull in using of the lead, and come not too neere the north side; that is the Middleground, which is very foule and rocky: from the south shoare (about halfe wayes betwixt the two foresayd buyes) it lyeth off somewhat shoale, of that you shall have at one cast five or sixe, & the other but 3 fathom.

Buye in the Reefsholl. When you come by the buye in the Reefsholl, which lyeth upon the point of the norther riffe of Draecker, leave that on the larboard side, and runne on south about by it, unto Copenhaven. The Markes of this buye are these: there lyeth a round hommock or great rock about half a league within the land, when that is right east from you, then it commeth right with a flat steeple which stands about a league within the land, then you are even thwart of the buye, or poynt of the foresayd riffe. These marks will serve at times when the buy lyeth not there. A little to the northwards of that buy lye the great ships which tarry for wind in five or six fathom, there is good anchor ground.

*F*rom the buye upon Draker-riff unto Kuyck, the course is southwest five great leagues, but unto the riff of *F*asterborn, or Steden, it is south and south and by west 5 leagues, in the fareway betwixt Draecker and Fasterborn it is six, seven, and eight fathom deep, but between Fasterborn and Steden, 10, or 12 and 13 fathom, but by Steden deepest.

Under Steden you may anchor as well to the southwards of it, for northerly, as to the northwards for southerly windes. If you wil anchor for northerly winds, then run in betwixt Steden and Meun, a good wayes into the bay, so that the steep poynt of Steden lye about northnortheast from you, anchor there in 8 or 9 fathom, and you shall lye land-lockt for north and northwest winds: But if you will anchor for south or southwest winds, then anchor to the northwardes of *S*teden, so that the southeast poynt be south and by east, or southsoutheast, and the northwest poynt northwest or westnorthwest from you, there it is good lying in seven fathom, the ground is there small white and black sand. If you will set saile from thence to the shoales or grounds, then goe not more northerly then northeast, so long untill that you come by the riffe of Draker, then run about by it in five fathom.

To the northwards of Steden the coast of *Z*ealand goeth in with a great bay into Kuyck, it is there all to the westwards shoale water in five, sixe and seven fathom, and good anchor ground, so that you may anchor every where there abouts.

The riffe of Fasterborne lyeth of southwest to *S*eawards a league and a halfe. It is a fowle stony and rocky riffe, upon the end of it lyeth a buye in 4 fathom. You may run about by it upon your lead in five fathom with small ships of little draughts. Men doe hold for a marck of this riffe that when the steeple of Fasterborn and the castle come one in the other, that then they are thwart of the poynt of the riffe. He that commeth from the northwards, and will sayle about Fasterborne with a northerly or northeast wind, and that he will come somewhat neere about the riffe, and commeth in five or sixe fathom, he must be very quick in using the lead. When old Fasterborne Church commeth halfe wayes to the Castle and the Church of Falsterborne, then beginneth to come the worst and shoalest of the riff, that lasteth untill that Old Falsterborn church commeth to the eastwards of the houses of Falsterborne, before

fore that you are not paſt the riffe. If you ſhould luffe up ſooner about by it, you ſhould run in great danger with a ſhip of great draught, you ſhall have (comming againſt the riffe) the one caſt 4 or 5, and then preſently three fathom upon it, all hard ſtony ground. Therefore it is beſt with a ſhip that draweth twelve or fourteene foote, to come no neere this riffe then in ſix or ſeven fathom.

If (when you come from the eaſtwards) you wille ſaile about Falſter-borne, and come alongſt the ſhoare with a northeaſt wind in ſix or ſeven fathom, and Falſterborne is about north, or northnortheaſt from you, then it ſhoaleth up very faſt in two fathom, or two fathom and a halfe. Therefoore keepe you further off from the ſhoale in tenne or twelve fathom, ſo long untill that the Caſtle be northeaſt, or northeaſt and by north from you, or that old Falſterborne church come halfe way to the caſtle of Falſterborn and Falſterborn church, then you cannot ſayle upon the riff from the eaſtwards, but running about by it in five fathom, then you muſt be very carefull in uſing your lead. But if you will come neere the riff in foure or five fathom, when old Falſter-born Church commeth to the eaſt end of Falſterborn, you ſhall run in great danger for to come on ground. When you come within the Riffe, you may run alongſt by the coaſt of Schoonen in four fathom without taking hurt.

He that commeth out of the Sound, and is bound to the ſouthwards of Meun, may come ſo near Meun as he will, and looſe up to the weſtwards by the poynt, and anchor where he pleaſe, in five or ſix fathom. On the northſide of Meun you may alſo anchor in ſix fatom, behinde a litte riffe that ſhooteth off from the north poynt, for an eaſt, ſouthſouthweſt and weſt wind, it is there all over flat, and good ground.

From Meun to *Steden*, the courſe is northweſt and by north four leagues, betwixt them both goeth in the Welf-ſound, or Wolvegat, that runneth paſt Werdenburgh and Neſt-veld through to Golverſound out into the Belt.

Meun and Falſterborne lye north and by eaſt, and ſouth and by weſt five leagues aſunder.

Of the Tydes and Courſes of the ſtreames.

In the *Scawe* reach, betwixt Maelſtrand and Waerſbergen the ſtreame goeth moſt ſtill with the winde and it ripleth there ſometimes in ſome places, as if there were ſhoals, this you may finde in calme weather, if you let a lead ſinke to the ground.

By the *Scawe* the Streame commeth moſt commonly falling out at the Belt towardes the land of Northeaſt, eſpecially when the winde hath blown a while out of the eaſt or northeaſt, and runneth alongſt by the Norwaye to the northwardes.

Men comming off from Anout, that will ſayle by night with a weſterly winde, towardes the *Scawe*: or comming from the weſtwardes about the Scaw, with a ſoutherly wind, being bound for the Sound, might ſoon be carried with this current under Norway, a good while before they ſhould thinke or feare of it. Of this current read further in the firſt booke.

In this fareWaye betwixt the *Scawe* and the Sound, & then from the *Sound* untill about Falſterborne, it is exceeding neceſſarie that a Pilot (or he to whom the charge is committed) be very carefull in looking out, & be very vigilant, that he may avoide the multitude of daungers, of ſhoales and riffes lying there: the skilfulleſt and beſt experienced off all hath there enough to doe.

Through the *Sound* and the ſhoales or groundes, the ſtreame runneth commonly with the winde, but the moſt part of the time to the northwards, before the comming of a hard eaſtwinde, or when it hath blowne out of the eaſt, then the ſtreame runneth ſtill out the northwards.

Courſes and Diſtances.

From the weſt end of the Paternoſters to the Maelſtrand, the courſe is eaſtnortheaſt 2 leagues.
From Maelſtrand to Winneu ſoutheaſt 5 leagues.
From Winneu to Maelſound ſouthſoutheaſt 3 leagues.
From Maelſound to Waerſbergen ſouthſoutheaſt 5 leagues.
From Waerſbergen to Tuylo ſoutheaſt 5 leagues.
From Tuylo to Laholme ſoutheaſt and by eaſt 5 leagues.
From Laholme to the poynt of Turko behinde Swedereur the courſe is weſtſouthweſt 3 leagues.
From Turko to Engelholme ſoutheaſt 4 leagues.
From Engelholme to Col weſt 6 great leagues.
From Maelſtrand to Nyding ſoutſoutheaſt 8 or 9 leag.
From Maelſound to Nyding the courſe is ſouthweſt and ſouthweſt and by weſt a league and an half.
From Nyding to Waerſbergen ſouthe about 5 leagues.
From Waerſbergen to Coll ſouth & by eaſt 12 leagues.
From the ſouth end of Swedero to Coll ſouthweſt 4 leag.
From the Riffe of the Scaw to Maelſtrand eaſtnortheaſt 13 leagues.
From the Riffe of the Scaw to Nyding ſoutheaſt and by ſouth 13 leagues.
From the *Riffe* of the Scawe to Waerſbergen eaſtſoutheaſt 20 leagues.
From the Riffe of the Scawe to Coll alongſt without the Trindel ſouth 30 leagues.
From the Riffe of the Scawe to Leſou ſouthſoutheaſt 8 leagues.
From the Riffe of the *Scaw* to the Trindel due ſoutheaſt 8 leagues.
From the Trindel to Anout riffe ſoutheaſt, or as ſome will ſayle ſomewhat more ſoutherly, 10 leagues.
From *Anoutes* riffe to Coll it is right ſoutheaſt 10 leag.
From Anouts riffe to Haſelin ſouth 11 leagues.
From Coll to Haſelin ſouthweſt & by weſt 8 leagues.
From Coll to Elſeneur, the courſe is ſoutheaſt, & ſoutheaſt and by ſouth 5 or 6 leagues.
From Lapſand to Ween ſouthſoutheaſt 3 leagues.
From Elſeneur to the norther buye in the ſhoales or grounds, ſoutheaſt and by eaſt 6 leagues.
From Elſeneur to Landſcroone eaſtſoutheaſt 4 leagues.
From Ween to Malmuyen ſoutheaſt and ſoutheaſt and by ſouth 6 leagues.
From Malmuyen to Reefſholme weſt 5 leagues.
From Malmuyen to Steden ſouthſouthweſt and ſouthweſt and by ſouth 10 leagues.
From the buy upon Draker-riff to Kuyck ſouthweſt, 5 great leagues.
From the buye upon Draker-riff to Steden, the courſe is ſouth and by weſt 5 great leagues.
From the Buye upon Draker-riff to the buye upon *Falſterbornes*-riffe, the courſe is ſouth 5 leagues.
From Meun to Steden northweſt and by north 4 leagues.
From Meun to Valſterborne north & by eaſt 5 leagues.
From Meun to the buy upon Falſterborn-riffe north 4 or 5 leagues.

How theſe Lands doe ſhew themſelves at Sea.



Thus ſheweth the land betwixt Maelſtrand and Waersbergen.

Thus



Thus ſheweth the Land of Waerſbergen, when you ſaile alongſt by it, from Anout into the ſound.



Thus ſheweth Anout, when you ſayle off from Leſou.



Thus ſheweth Leſou when you ſayle from the Scawe towards it.



Thus ſheweth Zealand, when you come from *Anout*, and will ſayle toward the Sound.



Thus ſheweth the Land of Schoonen off from Col unto Falſterborne, when you ſayle trough the ſhoales or grounds.

The fifth Demonſtration,

Where in

Are sheweth the Coaſts of Norway, from the Paternoſters to the Nazo.

Paternoſters. THe weſt end of the rockes (wich men do call the Paternoſters) and Harmenſhead, lye northweſt and by weſt ſomewhat Northerly, and ſouth and by eaſt ſomewhat ſoutherly 5 leagues aſunder, to the ſouthwardes of them men do ſayle into Maelſtrand. *U*pon the Coaſt betwixt *F*arder and Maelſtrand, is allmoſt every where good anchor grounds in 35 and 40 fathom.

From Harmanſhead to *S*outherwixholme the courſe is ſouth and by eaſt ſix leag. betwixt them lyeth Boechſchaer, but two leagues to the ſouthwards of Harmanſound lyeth Kerckſound, which is a great river, which lyeth in farr within the Land.

Northerwixholm. Southerwixholm. Northerwixholm and Southerwixholm, two great Iſlands, in a great ſound, which lyeth far & deep within the land, upon it (far within the land) lye many little townes, as Oldburgh, Oldwat, Alleroers, and Dragens, from thence commeth much fat ware. Southerwixholm and the Iſland Akerſound, lye northweſt and by weſt, and ſoutheaſt and by eaſt ſix leagues aſunder, and to Ottrom northweſt five leagues.

The Iſland Akerſound men may ſayl round about it, to the northwards of it lyeth a great Bay or *S*ound, lying in farre within the Land, called Ottrom.

Ottrom. Akerſound. Graswycke. From the Iſland of Akerſound, to the Siſter the courſe is weſt and by north 4 leagues, betwixt them lyeth the Graſwycke, within the Siſters, lying from Farder eaſt northeaſt about 7 leagues. When you will ſayle in there, you muſt leave the ſharp poynt on the larboard ſide, within lyeth a round rock, which you may ſayl about on both ſides, thwart of it is good anchor ground. Northfrom this rock lyeth a great Bay, fit for ſhips to lye in, that tarrie for a winde, within lyeth alſo a round rock. Men doe run in alongſt by the weſt land, which lyeth in firſt north, and about the Iſland northnortheaſt, they leave the Iſland on ſtarboard ſide, & run in northnorthweſt by the weſt land. To the eaſtwards of Graſwycke, alſo betwixt the Siſters & *A*kerſound lyeth Shiphill, that is a Haven where men lade *S*pars and fat wares.

The Siſters. *F*rom the Siſters unto Baſt the courſe is northweſt and by weſt five leagues. Behind the *S*iſters to the ſouthwards of the poynt of *R*oge, lyeth the haven of Elſtang, 5 leagues. When you come off from *F*arder, you goe muſt diſtant from the Iſland *F*arder northeaſt and by eaſt five leagues. When yon come off from Farder, you muſt run through within the rocks, which lye within the Siſters, untill you come againſt the land, there you ſhall find a great gray rock, which you muſt leave on the larboard ſide, and the ſmall rocks that lye there within on the ſtarboard ſide, and then alongſt about by the weſtland, & then the haven opens it ſelf, which is narrow, & within flatt ant ſoft ground.

When you ſayle from Farder or Baſt unto Soen-water, you ſhall meet with a red poynt, betwixt the Soen-water and the Copperwycke. He that is bound into Soen-water muſt run alongſt to the eaſtwards of it, but he that is bound into Copperwycke muſt goe un alongſt to the weſtwards of it and leave it on the ſtarboard ſide. When that you come within the Lams, you ſhall eſpie a little Church upon the weſt-land, there is the lade place of the Copperwycke, you may ſayl up from thence to Brokenes. On the north or eaſt ſide lyeth Holmſound, from *F*arder to the poynt of Roge the courſe is northnortheaſt five leagues. At the eaſt end of Roge you may anchor, there is a playn ſtrand, you may run through betwixt the Roge & the Calf, but anchor under Fletto, then you muſt run through within the two ſmall rocks.

From the Iſland *F*arder to the *S*oen-watet, the courſe is north, ſomewhat eaſterly, but from Baſt north and by eaſt. The Soen-water lyeth in moſt north. Upon it lye many havens and lade places, moſt on the ſtarboard ſide as you come in. Firſt there is Mos-ſound, a Haven that goeth up to the eaſtwards, and then there is Wykeſtee, which is a bight behind an Iſland, afterwards *S*hiphill, a ſandbay and a very good road, that goeth ſo up alongſt to the northwards into Anſlo, and then it runneth about to the ſouthwards into the Bottom.

From the Iſland *F*arder to Laerwyck the courſe is weſtſouthweſt foure leagues, betwixt them both lyeth the little towne Tonsbergen in a great Bight. *A*nd from Farder to the Iſland Baſt the courſe is north and by weſt five leagues, betwixt both lyeth a fowle poynt. To the ſouthwards of Baſt leyth Markenboet, and the

Bight

Cuſten van

NOORWEGEN,

van Der Neus tot aen de Pater noſter
ook hoe de ſelvige Landen van Iutlant
gelegen zyn.

N

O

O

R

W

't Hooge lant van Spanger

Omgekeerde Boot

Drommels

Bergh benoorden de Drommels

De Neus

Vlieder

Ellebogen

45

45

45

Duytsche mylen 15 in een graet

Spaensche mylen 17½ in een graet

Eng. en Fran. mylen 20 in een graet

De Bay

Brakenesse

Akarshuys

Anstoo

De Bolen

Noorder water

Kalers

De Vos

Copervaert

Snoek

Tidland water

Oostland

Abbesoore

Ogtland

Ondt Tongefondt

Comme Grondt

De Vogle

De Roers

't gemeen Ogtland

Tongeberge

Vogle Hoeck

Bast

Manneke Eylant

Roo

Elsange

Graswyck

De Suffers

Karder

Akersondt

Noorderwyck hoim

Harmenshooft

Harmensondt

Kempondt

Roode water

't Soete water

Schuyt

Rockwick

Vogelse

Alysondt

Schuyt

Pas van Oostland

Pas van Frankrijck

Pas van Engelant

Pas van Vlaenderen

Pas van Calis

Pas van Dover

Pas van Duynkercken

Pas van Hollant

Pas van Texel

Pas van Vlie

Pas van Ameland

Pas van Schelling

Pas van Borkum

Pas van Emden

Pas van Wangeroge

Pas van Jade

Pas van Weser

Pas van Elve

Pas van Hamborch

Pas van Lubeck

Pas van Wismer

Pas van Rostock

Pas van Stettin

Pas van Dantzick

Pas van Pillau

Pas van Memel

Pas van Libau

Pas van Windau

Pas van Mitau

Pas van Riga

Pas van Reval

Pas van Narva

Pas van Wyborg

Pas van Kexholm

Pas van Nyenschans

Pas van Petersburg

Pas van Archangel

Pas van Kola

Pas van Wardehuys

Pas van Vardeberg

Pas van Drontheim

Pas van Bergen

Pas van Stavanger

Pas van Lindesnes

Pas van Arendal

Pas van Laurwyck

Pas van Tonsberg

Pas van Oslo

Pas van Konghelle

Pas van Gothenburg

Pas van Marstrant

Pas van Uddevalla

Pas van Strumstad

Pas van Fredrickshall

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Pas van Strumstad

Pas van Fredrickshall

Pas van Carlstad

Bight of Aſko, bat to the northwards of Baſt lyeth Lowſound.

The Laerwyck is a great broad *Sound*, where are many Bights and Lade-places, where men may lye and lade *Firre*timber. *From* the eaſt poynt lyeth off a great rane of rocks a good wayes of ſoutheaſt and by eaſt into ſea, and run in almoſt halfe the *Sound*, called the Larwykes *Swines*, where of men muſt take heed. Within in this *Sound* it is flat water and ſhoale, ſo that farre within no great ſhips can lye a float.

A league to the eaſtwards of the Neſſe, or eaſt poynt of the Longſound, lyeth Stavange, they are ſome outrockes, where men may ſayle within on both ſides, to the eaſtwards of it lyeth the Sound of Laerwyck.

For to ſayle into the Neſſe, that is on the north ſide behinde the eaſtermoſt poynt of Longſound (you muſt run through betwixt the great rock, where upon the Warder ſtandeth, and the land of old Longſound, leaving the foreſayd rocks on the ſtarboard ſide, and ſo alongſt about that rough Iſland, untill you come into the Neſſe, which lyeth behinde a chindle ſtrand, there you ſhall lye under a chindle of rockes like red ſand: There lye alſo ſome little rockes thwart of that chindle. This is a good handſome haven, and light for to come into, there it is four and twenty and five and twenty fathom deep.

The Longſound is one of the faireſt havens of all Norway, and lyeth northnortheaſt from Jofferland diſtant one great league. Before old Longſound lyeth a high round rocke whereupon ſtandeth a great round Warder, for knowledge of this haven. Coninxhaven that is the ſouthermoſt or weſtermoſt channell of the Longſound, and goeth in betwixt the weſtermoſt rough poynt and Conings Iſland, and then men run alongſt to the eaſtwards of the Baers, which lyeth of from the foreſayd rough poynt. For to ſayle in there, you muſt run in amid channell, and anchor in the Coningſhaven in eight and twenty and thirty fathom.

For to ſayle through within Jofferland from Weſtkiell, the Sound lyeth through the channell firſt northeaſt and northeaſt and by north, and then eaſtnortheaſt, and afterwards againe northeaſt, and then you come to a place where the ſound is ſomewhat broader, there lyeth a ſuncken rock, which you muſt leave on the ſtarboard ſide, and edge to the north ſhoare. Being paſt that, you ſhall come againe in a very narrow ſound, which lyeth through moſt northeaſt, and is at ſome places ſo narrow, that the yard armes doe almoſt touch the rockes. Being through that narrow place, you muſt goe northeaſt and by eaſt, and eaſtnortheaſt, untill you come thwart of the Longſound, then you may ſayle in there northnorthweſt, or ſayle into the ſea as you will: Behinde Jofferland you may alſo anchor in fifteen or twenty fathom.

From the Baers unto the northermoſt rocks of Jofferland, that is the ſouthermoſt or weſtermoſt poynt of Longſound, the courſe is ſouthſouthweſt a great league, going ſouthſouthweſt from without the Baers, then you ſhall find a third part of water to Jofferland or ſhoale which you ſee quite under water about ſeven foote. Betwixt them both lye two havens, Eaſtkiell and Abbefoort, men ſayl in there to the eaſtwards of the out-rocks of Jofferland. *From* theſe foreſayd northermoſt out-rocks of Jofferland unto Eaſtkiell, it is northweſt about a league, but to Abbefoort northnorthweſt and north and by weſt alſo a league. Men may (comming from the ſouthwards, or from Weſtkiell) ſayle through within Jofferland, into Eaſtkiell, or Abbefoort.

When you come before Weſtkiell, you may ſee within the land three high hills, & alſo the high land of Longſound, lying northwards from you, that land is altogether very eaſy to be knowne, he that ſeeth it once, and takes regard of it, ſhall know it very well another time, when he commeth thereabouts.

A league to the eaſtwards of *Sandvoort* lyeth the haven of Weſtkiell, a little to the eaſtwards of it lyeth Jofferland. For to ſayle into Weſtkiell, you muſt leave all the great rocks (which lie of from Jofferland on the ſtarboard ſide,) and all the foreſayd little rocks of Sandvoort, and alſo a white holme whereupon a maſt ſtandeth on the larboard ſide, and run in firſt northweſt and afterwards northnorthweſt and at laſt north, untill you come about the weſt poynt, and then you muſt edge up northweſt to the north ſide of the Iſlands, which ly within the haven, there is a Voſſe, or an Overfall of water, there you may anchor in twenty or five and twenty fathom. Jofferland.

Thwart of Sandvoort lyeth a banck at ſea, which at ſome places is not deeper then three or four fathom, and lyeth alongſt to the eaſtwards untill thwart of Weſtkiell.

A great league to the eaſtwards of Sandvoort lyeth Longen. For to ſaile in there you muſt leave all the little rocks on the ſtarboard ſide, and run ſo alongſt by the land untill you come within the Long-holms which remain on the larboard ſide; and then right into the Bight. This is a faire haven, men come into it from the eaſtwards.

When you are before Oxefort and Longen, then the Drommels lie about weſtnortweſt from you. Markes of Oxefordt and Longen.

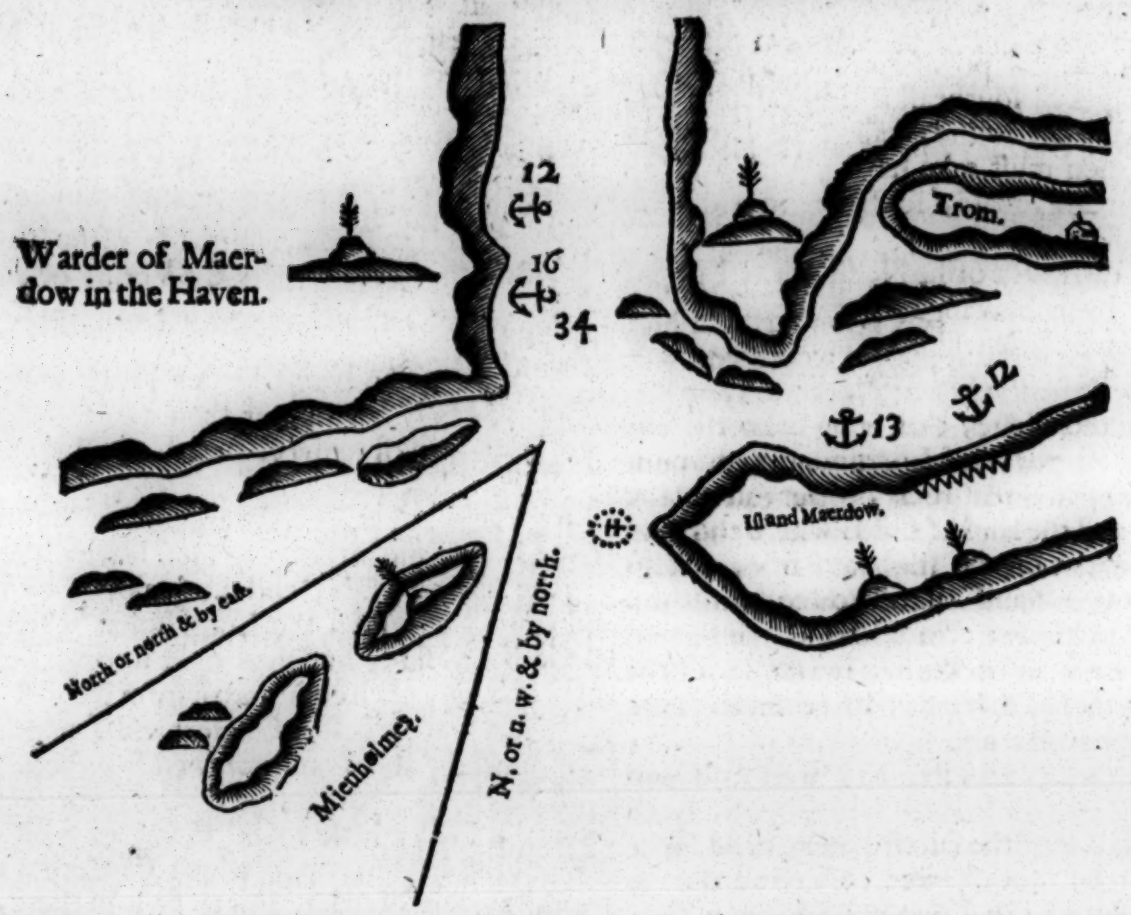
A league to the eaſtwards of Oxefordt lyeth Longen, before it lieth a little round Iſland or rock on the eaſt ſide of the haven, upon which ſtandeth a maſt with a barrell upon a Warder. For to ſayle in there, you muſt run in cloſe by that land where the Warder with the barrell ſtandeth upon, cloſe alongſt by the Warder, but there ſtandeth a hand on the ſtarboard ſide of the havens mouth, which poynteth that there lyeth thwart of it a ſuncken rock under water, there you muſt edge ſomewhat of from the ſhoare. Being within there, you may run to the eaſtwards againe into ſea, and come out in the Sound of Sandvoort. Longen.

About a league to the eaſtwards of Trom-ſound lyeth the haven of Oxefordt, which is a great broad, and large Sound, lying in firſt without betwixt the rock, north. Without in the comming in to the weſtwards of the havens mouth, lyeth a long rock, which you muſt leave on the larboard, ſide and ſomewhat paſt that long rock lyeth a ſuncken rock, which you muſt leave on the ſtarboard ſide and run in ſtill north unto the weſt poynt of the land, thwart where of lyeth a ſuncken rock which you muſt avoyd, when that you come then within the weſt poynt, you muſt ſayle in northweſt and northweſt and by north, and anchor on the north ſide of the haven, there it is wide and broad, with many bights, where you may anchor every where in twenty and five and twenty fathom. Oxefordt,

About halfe a league to the eaſtwards of Maerdow ſtandeth a little white Church upon the ſea ſide, to the eaſtwards of it goeth in the Trom-ſound, being a faire *Sound*. Without in the comming in, ſtand on the eaſt or north ſide two Warders upon a high hill, you muſt ſayle in by them, and thwart of them you may alſo anchor, and from thence you may ſayle in further behind the Iſland Trom, and the land of Maerdow, untill you come into the *Sound* of Maerdow. Trom-ſound.

When the Drommels are northweſt and northweſt and by north from you, then you are right thwar of Maerdow. If you run in ſo out of the ſea, right with the Drommels, you ſhall fall right with Maerdow, that is a certain mark to know whether you be thwart of Maerdow, or to the eaſtwards of the weſtwards of it, but when you are cloſe before the land, or before the havens mouth, you cannot ſee the Drommels, becauſe they are then hidden of the cliffeland. To anchor under the Iſland there is the ſhoaleſt water, but with a northweſt or northnorthweſt winde, it is not ſo good to come from thence as out of the haven, but with an eaſterly winde it is better to ſet ſail from thence and to get into ſea. Marks of Maerdow.

The Haven of Maerdow.



The eaſtergat lyeth in weſtſouthweſt there lyeth a ſuncken rock on the ſtarboard ſide, when you ſayle in, therefore you muſt run in cloſe by the Iſland. It is not deeper there in the gat or channell then three fathom, but being come within it, you ſhall finde it deeper, you may anchor there under the Iſland in twelve or thirteen fathom, or you may run up to the weſtwards into the Sound, as is before ſayd.

For to ſail into Maerdow, trough within the Mewholmes.

With a bare winde, or otherwiſe, you may ſayle alſo in, to this weſter-gat of Maerdow, to the weſtwards of Miewholmes, thus: To the weſtwards of the ſouthermoſt Miewholme, not farre from it, lye two little rocks, even above water, and a little further off from it two other rockes which are ſomewhat greater, you muſt runne in amidſt the channell through betwixt them, leaving the two ſmalleſt lying on the ſtarboard ſide, and the two greateſt on the larboard ſide, that channell lyeth through moſt north and north and by eaſt. Being come to the end of the Miewholmes, you may ſayle up either towards the northeaſt behinde the Iſland Maerdow, or weſtwards into the Haven, as is before ſayd. There goeth ſometimes a good tyde out of this Haven, and the weſterly windes doe blow commonly out of this channell betwixt the high lands, therefore he that will come in here with a weſterly winde, muſt be very carefull, and keep up his top ſayles, or els he ſhould lightly not be able to get the haven, but drive out of it againſt his will.

Maerdow.

Thwart of the weſt end of the Iſland Maerdow lyeth a ſuncken rock under water, whereof you muſt take heed, when you ſayle in thus to the eaſtwards of the Miewholmes. When you are come within the foreſayd weſt poynt or the Iſland Maerdow, you may runne up towards the northeaſt behind it, and anchor in 12 or 13 fathom, or ſayle up towardes the northnorthweſt into the Sound, & anchor there on the weſt ſide in 16, 14, or 12 fathom, according as you ſayle farre in. In the going into the Sound, or haven, it is 34 fathom deep.

The Iſland Maerdow ſtandeth (upon the top of it) full of trees, and round about it are all bare rockes. On each ſide of the Iſland goeth in a channell. The weſter gatt or channell goeth into the weſtwardes of the Iſland, and the eaſter gatt to the eaſtwardes of it. For to ſayle into the weſter gatt, you muſt leave the Mewholmes (they are a few rocks and Iſlands to the weſtwardes of the Iſland of Maerdowe) on the larboard ſide, and the Iſland on the ſtarboard ſide, and run in ſo betwixt them both northweſt and by north, but with a ſouthweſt wind, you muſt ſayle in northweſt. Upon the northermoſt Miewholme ſtandeth a Warder.

To the eaſtwards of Hamer-ſound, men doe goe into Kerck-ſound, and then a halfe league more to the eaſtwards lyeth the haven of Heſnes. Upon the land of Heſneſſe ſtande two Warders: thwart of them it is very ſteepe, but towards the little Church it is ſhoaler, to witt, about thirty fathom: the out rockes thereabout are all red of colour.

On the weſt ſide of the havens mouth lyeth a ſuncken rock under water, called the Koenagle, upon the land ſtand two little maſtes, when they come one in the other, then you are thwart of the Koenagle. The two foreſayd little maſtes, ſtand upon a gray Holme, leave that on the ſtarboard ſide, and go ſo ſtill inwardes, there it is high land, and the Drommels lye from thence northnorthweſt within the land, there you may ſayle through within the rocks, untill you come into Maerdow.

To the eaſtwardes of old Hilſound lyeth Hamer-ſound, lying in northnortheaſt. On the weſt ſide of the Havens mouth lyet a ſuncken rock which you muſt avoyd, and ſayle cloſe alongſt by the Iſland, which lieth on the eaſt ſide of the havens mouth, and anchor behinde the Iſland right againſt the Warder, in thirty fathom. The eaſter-gatt lyeth to the eaſtwards of that Iſland, in and out northweſt, and ſoutheaſt: upon the weſt ſide lyeth a rock with a Warder.

To the eaſtwards of Wolf-ſound lyeth old Hill-ſound, but betwixt them both, at the poynt of the weſt ſide of old Hill-ſound lyeth the Iſland of Blind-ſound, to the eaſtwards of it lye manie greate rockes, with two or three Warders upon them.

For to ſayle into the old Hill-ſound, you muſt runne alongſt to the eaſtwards of Blind-ſound with the rocks that lye by it, in by the weſt land, leaving them on the larboard ſide, and the foreſayd greate rockes or Holmes with the Warders altogether on the ſtarboard ſide, there are divers faire ſounds, where men may ſayle into and anchor in, without taking hurt. You may edge up to the weſtwards about the poynt, & ſayle through betwixt the Iſlands, that you can not ſee the ſea.

On the eaſt ſide of Reperwyck lyeth Wolf-ſound, before it lye two great Iſlands, which ſhew themſelves in high

high gray Rockes, with three or foure Warders upon them, whereby you may know them.

Wolfſound is a narrow haven for to ſayl into, there ſtand two maſtes upon the weſt-land, where you muſt goe in cloſe by, leaving them on the larboard ſide, and ſome little rockes on the ſtarboard ſide, untill that you come within the greate Iſland, whereupon the great Warders ſtand, there you may anchor, and lye landlockt for all windes. From thence you may runne foorth through within the rocks and come out againe into the ſea, by the old Hill-ſound, or you may runne out alſo at the Eaſtergat of Wolf-ſound, there ſtandeth a greate Warder on the weſt ſide of the gat, upon a round high rock, there you may ſayle out or in by it where you will.

Three leagues to the eaſtwards of Fleckerie lyeth Reperwyck, a broade and wide *S*ound, lying in north, and north and by weſt. For to ſayle in there you muſt runne in by the land of Wolf-ſound (lying on the eaſt ſide of this haven) leaving all the rocks (& alſo where the maſt of Wolf-ſound doe ſtand upon) on the ſtarboard ſide, and all the rocks of Ran-ſound on the larboard ſide, untill that you come to the end, or within in the haven, and then you muſt edge up to the weſtwards about the poynt, and anchor there, that is a good haven for ſhips that are bound to the weſtwards.

*A*bout three leagues eaſtnortheaſt from Holy-ſound and eight leagues to the eaſtwardes of the Naze, lyeth the haven and Iſland Fleckerye, you may ſayle in at both ſides of the Iſland, as well from the weſtwardes, as from the eaſtwards into the haven of Fleckerie. The weſtergat lyeth in northnortheaſt. When you come of from Holyſound then you ſee open into the Sound, you muſt ſayle alongſt by the Rockes without Holyſound, untill you come within the Iſland *F*leckerye, and edge then weſtwards towards the land, untill you come within the Dieveholme, where the gallowes ſtandeth upon, and anchor by the weſt land, in fifteene, ſixteene, or twenty fathom: You muſt bring out there an anchor a head, and make a cable faſt on the rocks upon the land. You may runne from thence to the eaſtwards of the Iſland Fleckerie, out againe at the Eaſter-gatt eaſtnortheaſt into ſea, and then you muſt leave the little Iſland within the Warders, which lyeth at the eaſt end of the Iſland Fleckerie, with all the greate rockes by it on the ſtarboard ſide, and all the black holmes on the larboard ſide.

The Eaſter-gatt of Fleckerie goeth in weſtnorthweſt, betwixt the Iſland Fleckerie and the poynt of Ranſound. When you come before it, you may ſee open in the Voſſe. *F*or to ſayle in there, you muſt leave all the black rocks thwart of the poynte of Ranſound on the ſtarbord ſide, and the great graye rockes with the little Iſland, where the Warders ſtand upon, on the larboard ſide, when as you come then by the forenamed Dieven-holme, you muſt runne to the weſtwards of it unto the Sandbay, and anchor there, as is beforeſayd.

When you are thwart of the Eaſter-gatt of *F*leckerie, then there lyeth right thwart from you within the land a high round hill, which men doe call the Boate turned up ſide downe, which lyeth out above all the lands thereabouts, and comming from the weſtwards againſt Fleckerie, there ſhewe alſo three high double lands, which by little and little ſeeme to goe to nothing towards the Drommels.

Three leagues eaſtwards of Scheerſont lyeth the Iſland called Holyſound, where upon ſtand two great Warders, you muſt ſayle in weſtwards that Iſland alongſt by Geve, which is a great high blacke cliffe which is the marke to know the land by, you muſt leave them in your ſayling in on your larboard ſide, till you are within, then you may anchor under the foreſayd Iſland, thereabouts runneth a great bay in towards the land, where you way ſayle in, and where many ſhips doe lade.

A little to the eaſtwards of Sprarrels lyeth a haven called *S*carſound, or Weſtryſen, for to ſayle in there, you muſt leave Sparrels to the weſtwards on the larboard ſide, and all the great Holmes or rocks to the eaſtwards on the ſtarboard ſide, and runne ſo inwards untill you come into the haven.

From the Naze (that is the ſouthermoſt poynt of Norwaye on the north ſea) weſtwards, the coaſt lyeth ſomewhat alongſt by the land of Leeſt, weſtnorthweſt, but to the eaſtwards of it (alongſt without the rockes; untill paſt the Iſland Fleckerie) eaſtnortheaſt about ten leagues. From thence alongſt northeaſt unto the Long-ſound about 16 leagues. This coaſt is all alongſt full of high ſteepe ſtonie hilles and without it full of manie rockes verie ſtrange to behold, but it hath manie faire deep Havens, with very good enchor ground, where in great abundance of timber and boards laden. The firſt Haven to the eaſtwards of the Naze, is called the Kloof or the Cowe & Calſe, after two high hommockes, eaſy to be knowne, the one ſomewhat greater then the other, which lye within the Haven upon the high land, and are alſo called by the Dutſh *S*hippers. He that will ſayle into this Haven comming from the weſtwardes, ſhall meete with a great rock ſomewhat to the eaſtwardes of the Naze, called Melyn, where upon is a Warder, being paſt that he ſhall find another outrock, where upon ſtandeth alſo a Warder, called Sparrels. Betwixt theſe two outrockes, he muſt runne into this haven the Kloof. When he commeth againſt *S*parrels, there lyeth a ſuncken rock under water, where of he muſt take heed. *S*omewhat within Sparrels lyeth an other Rock in the farewaye, but above water: which he muſt leave on the larboard ſide. In ſayling in ſo, the haven doth open it ſelf, by little and little, and ſo ſhall come againſt the Kloof: being come within it he muſt edge up to the weſtwards, about the poynt, and anchor there in a ſand baye, in fifteen or ſixteen fathom, ſo that the two foreſayd hommocks the Cowe and the Calſe ſtande about northeaſt from him.

The kloof, Cowe & Calfe.

Of the ſtreames on theſe Coaſt.

*A*lthough the water on theſe Coaſts of Narway doth ebbe and flou beyond Bergen as farre as Stadt, nevertheleſſe it keepeth no certaine tyde, in ſometimes of the yeare and principally in the Spring time there goeth ſuch a ſtrong ſtreame about weſt alongſt Norway, that a ſhip having a ſouthweſt ſtorme ſhall not bee able to ſtem it, when it can beare ſayle. How nearer you come under the land of Norway ſo much the ſtronger goeth the ſtreame. This ſtreame falleth out of the Belt, on againſt the land from the northeaſt, and turneth ſo alongſt by the Coaſt of Norway towards the north Sea. Read more largely of this in the deſcription of the Belt.

How theſe lands doe lye one from the other and from other lands.

From the weſt end of the Paternoſters to Harmanſhead north and by weſt ſomewhat northerly 5 leagues.
From Harmanſhead to ſouterwixholm north and weſt 6 leagues.
From *S*outherwixholm to *A*kerſound ſoutheaſt and by eaſt 6 leagues.
From *A*kerſound to the Siſters weſt and by north 4 leagues.
From the Siſters to Baſt northweſt and by weſt 5 leagues.
From the Red-poynt to Baſt ſouthſouthweſt 3 leagues.
From Coperwyck to Baſt ſouth and by eaſt 4 leagues.
From Soen-water to *F*arder ſouth ſomewhat weſterly 8 leagues.
From Baſt to Farder ſouth and by eaſt 5 leagues.
From Monck Iſland, or *R*oge, to Farder ſouthſouthweſt 5 leagues.

From the Siſters to Farder ſouthweſt and by weſt four leagues.
From Farde to Laerwijck weſtſouthweſt 4 leagues.
From the Iſland Farder to the Longeſound weſtſouthweſt 8 leagues.
From the Longeſound to the Jofferland ſouthſouthweſt one great league.
From Jofferland to Maerdouw ſouthweſt 8 leagues.
From Jofferland to Fleckory ſouthweſt 19 leagues.
From Eaſtryſen to Maerdow ſouthſouthweſt 3 leagues.
From Maerdow to Wolffound, or Reperwyck weſtſouthweſt 8 leagues.
From Maerdow to Blindſound ſouthweſt 6 leagues.
From Blindſound to Wolffound ſouthweſt 3 leagues.
From Wolffound to Fleckory ſouthweſt and by weſt and weſtſouthweſt 3 leagues.
From Reperwijck or Wolffound to the Naze weſtſouthweſt 11 leagues.
From Fleckory to the Naze weſtſouthweſt 8 leagues.
From Schare ſound to the Naze weſtſouthweſt 3 leagues.
From the Naze to the Holmes in Jutland ſoutheaſt 19 or 20 leagues.
From the Naze to Boevenbergen ſoutheaſt and by ſouth 24 leagues.
From the Naze to Holyland the courſe is ſouth and by eaſt and ſouthſoutheaſt 67 or 68 leagues.
From the Naze to the Eems, ſouth, ſomewhat eaſterly 75 or 76 leagues.
From the Naze to Born-riffe ſouth, ſomewhat weſterly 83 leagues.
From the Naze to the Teſſel or Maerſdeep, the courſe is ſouth and by weſt diſtant 93 leagues.

From the Nazo to Walcheren ſouth and by weſt 125 or 126 leagues.
From the Naze to the Head, or the Strait betwixt Calice and Dover, the courſe is ſouthſouthweſt, or ſomewhat more weſterly 143 leagues.
From the Naze to the Holmes before Yarmouth ſouthſouthweſt, ſomewhat weſterly 104 leagues.
From the Naze to Flambrough head ſouthweſt 100 leagues.
From the Naze to Scarborough ſouthweſt 99 leagues.
From the Naze to the river of Newcaſtle ſouthweſt & by weſt ſomewhat weſterly 104 leagues.
From the Naze to Liet in Scotland weſtſouthweſt ſomewhat weſterly 103 leagues.
From the Naze to Boeckneſſe weſt, ſomewhat northerly 88 or 89 leagues.
From the Naze to Fayerhil weſtnorthweſt 93 leagues.
From the Naze to Hitland the courſe is northweſt and by weſt about 100 or 101 leagues.
From the Kloof or the Cow and Calf to the Scaw the courſe is eaſt and by ſouth, ſomewhat eaſterly 30 leagues.
From Fleckory to the Holmes in Jutland ſoutheaſt and by ſouth 19 leagues.
From Fleckory to the Scaw eaſt and by ſouth 25 or 26 leagues.
From Reperwycke to the Scaw eaſt and by ſouth and eaſtſoutheaſt 24 leagues.
From Maerdow to the Holmes the courſe is ſouth 24 leagues.
From Maerdow to the Scaw ſoutheaſt and by eaſt 20 or 21 leagues.

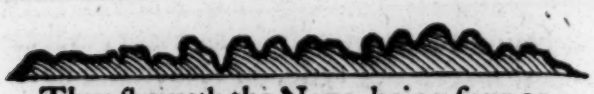
How theſe Lands doe ſhew themſelves at Sea.



The ſheweth the Cow and Calfe, being foure or five leagues north and by eaſt from you.



Thus ſheweth the Covv and Calfe, vvhen you come from the vveſtvvards, and are thwart of them.



Thus ſheweth the Naze, being four or five leagues weſt from you.



Thus ſheweth the land to the eaſtwards of Longſound, when you are about five leagues of from the land, and ſaile from the weſtwards alongſt by it.



Thus ſheweth it ſelfe the land of Norway, betwixt the Naze and Fleckory, when you are about five leagues of from it.



The land betwixt Fleckory and Maerdow, or the Drommels, ſheweth thus, when you come from the weſtwards, and ſayle alongſt by it.



Thus ſheweth the land betwixt Maerdow and Longſound, when you are about Langen, five leagues without the land.



Thus ſheweth the land of Northeaſt betwixt Southerwyckſholme and Maelſtrand, when you ſaile alongſt by it, being foure leagues without the land.

The

Kars fioert

Sternerve

Skilts fioert

Bock fioert

Cleine Bock

Schmits nes

't Liet

Wytings oogh

Klip

Stafanger

Diefholm

Doefwyck

Tongenes

Sibrich steen

Vostsleen

Vstua

DE IED

Ruti

N O O

Duytsche mylen 15 in een graet

Eng. en Fra. mylen 20 in een graet

De Cuſten
van
NORWEGEN
Der Neus en Schui:
tenes

W E G E N.

Koe
Kalf

Der Neus

Nieu Silloe

Oud Silloe

Bischops:
boden

Berghsondt

Wingboord

't Landt van
Bleeſt

Ekesondt

Soggendal

Sierowach

Hitteroe

Foostenen

The ſixth Demonſtration,

In which

Are ſet forth the Coaſt of Narway, between the Naze and Schuytenes.

ALittle to the weſtwards of the poynt of the Naze lye two havens, New and Old Silloe, or Silleu; ſome doe call theſe one haven (like as alſo men maydoe) and diſtinguiſh it into an eaſter and weſtergat or Haven, for men can goe with boats through within the rockes from the one into the other, but not with great ſhips.

Silloe. *For* to ſayle into the eaſter-gat, or New Silloe you muſt take heede of the Biſhops Boeden, which are a few out-rocks a little to weſtwards of the poynt of the Naze, right before the middeſt of the *Sound*, leave them on the larboard ſide, & ſayle in alongſt by the land of the Naze untill you come ſomewhat within the foreſayd Biſhops Boede, and then you ſhall find there alſo a ſuncken rock, which you muſt avoyd, run about to the northwards of it, and edge then up to the weſtwardes behinde the Iſland of New Silloe, and anchor there againſt the white Church within the foreſayd rock.

Old Silloe. *For* to ſayle into the Weſter-gat, or Old Silloe, you muſt run about to the weſtwards of the out-rocks, and Biſhops-Boeden, and ſayle right with the ſouth end of the land of Leeſt; being come by it, run to the eaſtwards alongſt by it, but take heed of ſome rocks, which lye of from the innermoſt Iſland on the ſtarboard ſide, being there within anchor againſt the Iſland, where you pleaſe.

The Land of Leeſt.

Hitteroe. *From* the Naze to the Iſland Hitteroe, or Hittereu, the coaſt lyeth alongſt the land of Leeſt weſtnorthweſt 5 leagues. To the ſouthwards or the weſtwards of that Iſland men doe ſayle into the haven of Windfoord, which lyeth in northeaſt, but to the northwards of it men doe run into Berg-ſound, eaſtnortheaſt in betwixt the Iſland and the land.

Windfoord.

Berg-ſound. In that Iſland is alſo a good haven, which you muſt ſayle into from the northwards, the havens mouth is not very wide when you are come in within it, you may edge up to the eaſtwards or ſouthwards, and anchor there.

Two leagues to the northwardes of Hitteroe lyeth a haven called Soggendall, there lyeth a little Iſland before it, within men may anchor, it is a good road for them which are bound to the ſouthwards. Betwixt them both not farre without the land, lye two out-rocks alongſt the ſhoare, called *Fock*-ſtones, the one lyeth a little more to the ſeawards then the other.

Soggendall.

Ekeſound. A league to the northwards of Soggendall lyeth Ekeſound, before it lyeth an Iſland, which you may ſayle into on both ſides of it, the ſouthergat lyeth in northeaſt; being come in there you muſt anchor on the north ſide of the haven in a bay, there is the beſt road in eight or nine fathom, the norther-gat lyeth into the eaſtwards; being come in there, you may anchor at divers places. Two leagues to the northwards of Ekeſound lyeth a haven called *Sierowach*.

Sierowach. *For* to ſaile in there, comming from the northwards; you muſt run in right with the ſouthermoſt ſand bay untill you come cloſe by the ſhoare, and then the haven doth open it ſelfe, loof up cloſe alongſt by the north ſhoare, then run up by it to the ſouthwards, and avoyd the weſt point, thwart of it lyeth a ſuncken rock twelve foot under water; being there witin, let your anchor fall in ſeven or eight fathom, and bring a cable on the weſt ſhoare, then you ſhal lye land-lockt for all windes. This is a good haven for thoſe which are bound to the northwards.

To the northwards of Sierowach lyeth the land the Jedder, which lyeth from Sierowach firſt northweſt and by north two great leagues to point Walbert, or Mids-Jedder, and the north four leagues, which is altogeter a clean whole coaſt, without any dangers or havens, except at the very north end, from which runneth of a little riffe northweſt into ſea, towards the Veetſtone.

Veetſtone. The Veetſtone is a great rock, lying about two leag. without the land, lying northnorthweſt from Mids-Jedder five leagues, betwixt them both, a great league to the ſouthwards of the Veetſtoone, ly ſome low black rockes, called Rut. When as you ſaile from Mids-Jedder on northnorthweſt towards the Veetſtone, then the Veetſtone doth ſhew him ſelve very roud, like a haicock, and ſayling ſo, you might lightly fall with the foreſayd rocks of *Rut*, but being a little more to ſeawards, the Veetſtone ſheweth it ſelf a little longer on the weſt ſide, then you cannot take hurt of the rocks of Rut.

Rut.

Whitings eye. *About* two leagues northnorthweſt from the Veetſtone lyeth an Iſland, where upon ſtandeth a Church called Whitings eye, but northnortheaſt from the Veetſtone 4 leagues, lyeth another Iſland before the ſound of Stavanger, called Sibrichſtone.

Sibricſtone. If you will ſayle into Stavanger comming from the ſouthwards, then ſayle through betwixt the Veetſtone and the maine land, leaving alſo the foreſayd rockes of Rut, lying on the ſtarboard ſide, but you muſt take very good heed of that little ſtone-riffe which lyeth off from the north end of the Jedder: ſayle in ſo untill that the Veetſtone doe lye ſouthweſt from you, then goe in northeaſt towards the poynt of Tongenes, which is a long point and low land on the ſouth ſide of the Sound.

Tongenes. When as you ſayle now from the Veetſtone towards Tongenes, then you ſhall ſee that Iſland Sibrichſtone before the *Sound*, which it doth ſhew it ſelf in two parts, leave that on the larboard ſide, and ſayle in by the poynt of Tongenes, but there lyeth a rock off to the northwards from the poynt: ſayle through betwixt the rock and the poynt, about eaſt or eaſtſoutheaſt into Doeswycke; when you are within the caſtle of Doeſwycke, there you may anchor. But if you will ſayle in further before the town of Stavanger, then leave the Diefholm on the ſtarboard ſide, and ſayle in ſoutheaſt and ſouthſoutheaſt before the towne, and anchor there where you pleaſe.

Doeſwyck.

Stavanger.

But when as you come from the northwards, and will ſayle to *Stavanger*, then run through betwixt the Veetſtone & the Whitings-eye, and then goe on northeaſt towardes Sibrichſtone, and the poynt of Tongenes, and doe further as hath been before taught.

From the Veetſtone to *Schuytenes*, the courſe is northnorthweſt five leagues: but from *Schuytenes* to Sibrichſtone through betwixt Whitings eye, the courſe is eaſt, five leagues.

Schuytenes.

Foure leagues weſt and weſt and by north to ſeawards from *Schuytenes* lye the rocks called the Outſeers.

Outſeers.

Gaeltje Ians Steerman of *Staveren* comming from Schuytenes and being about three or four leagues from it, hath caſt upon eighteen fathom and about eighteen leagues ſouth and by weſt ſayling, found 38 and 39 fathom, and going yet 5 leagues further upon the ſame courſe found 24 and 25 fathom, and yet 9 leagues further ſayling ſouth and by weſt & found 23 fathom water fine

ſandy ground and afterwards four and twenty and five and twenty.

Of the ſtreames on theſe coaſts.

On theſe Coaſtes of Norway of from the Naze, untill paſt Berghen unto Stade, the water riſeth and falleth, but keepeth no certaine tyde: but from thence towards Dronten, and to the northwards of it, it keepeth tyde according to the moone, like as in other places.

How theſe landes doe lye one from the other and from other lands.

From the Naze to Hitteroe the courſe is weſtnorthweſt 5 and 6 leagues.
From Hitteroe to Ekeſound the courſe is northweſt 4 leagues.
From Ekeſound to Sierowach the courſe is northweſt & by north 2 leagues.
From Sierowach to Mids-Jedder, northweſt and by north two and a half league.
From Mids-Jedder to Rut northnorthweſt 4 leagues.
From Rut to the Veetſtone north and by weſt a league and a half.
From the Veetſtone to *S*ybrichſtone, northnortheaſt 4 leagues.
From the Veetſtone to *S*chuytenes northnorthweſt 5 leagues.
From Sybrichſtone to *S*chuytenes through within Whitings eye weſt 5 leagues.
From the Naze to Outſeers northweſt 31 leagues.

Heights.

According to the Judgements of the Mapps the Corner of the Naze lyeth in 57 degrees 40 minutes.
*S*chuytenes lyeth in 58 degrees 36 minutes.

How theſe Lands doe ſhew themſelves at Sea.



Thus ſheweth the land of the Jedder, when it is northeaſt five leagues from you.



Thus ſheweth the land of the Jedder, when it is eaſtnortheaſt 5 or 6 leagues from you.

The ſeventh Demonſtration,

In which are ſet downe,

How you may ſayle up into the Liet of Bergen.

BEtwixt Schuyteneſſe & Bock goeth in the Liet of Bergen. Schuyteneſſe is about foure leagues long, at the ſouth end lye ſome ſuncken rockes and fowle grounds; for to avoyd them comming in out of the ſea, you muſt keep the top of Bock a little without the poynt of *S*chuyteneſſe, and then you ſhall goe cleare of them; But if you bring Bock cloſe by or to the poynt of Schuyteneſſe, and ſaile ſo right in for to runne about cloſe by the poynt of *S*chuyteneſſe, you ſhall ſurely ſayle upon thoſe foreſayde ſuncken *R*ocks and fowle grounds.

From the ſouth end of Schuyteneſſe, the Liet lyeth in firſt north and north and by weſt two leagues to the great Warder, which is a road ſo called after four great Warders, which ſtand there thwart of it upon the land of *S*chuytenes, for the knowledge of this road: there lye commonly the ſhips that tarry for a wind, being bound either to the northwards or to the ſouthwards, there it is very good lying in five, ſix, ſeven or 8 fathom, as well for northerly as ſoutherly winds, you may alſo anchor to the northwards of the Warders about a poynt in five, ſix, eight, ten and twelve fathom, there you ſhall lye landlockt for ſoutherly winds.

The great Warder.

A little to the ſouthwardes of the Warders lyeth a Bay, called the Coperwyke, within it is alſo a good haven for them which are bound to the eaſtwards, and will ſet ſayl with a weſt wind: with a eaſterly or northerly wind, you can not wel ſhift roads from thence or come out. At the comming in to this Baye lyes a ſunken rock, called the Coppernaile, upon it ſtandeth alwayes a great Pole, where by you may ſee to avoyd it.

Coperwyke.

Coppernaile.

Without at the ſouth point of Schuytenes on the eaſt ſide is alſo a little Bay or two, where men may anchor.

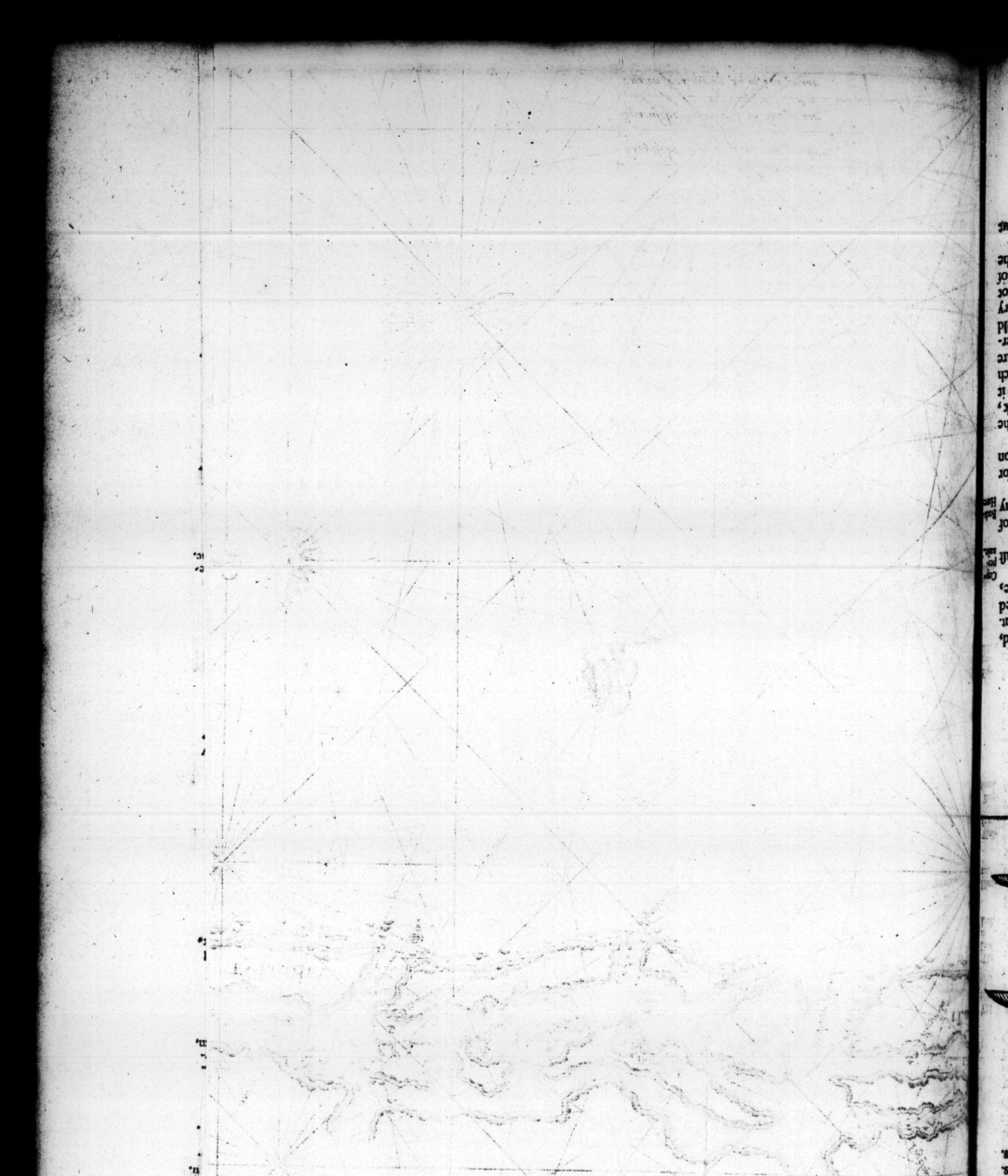
A little to the northwardes of Bock, on the eaſt ſide of the Liet it alſo a Bay, called Bock-haven, where men may come to anchor.

Bock-Haven.

*A*ll theſe roads, as alſo the Coperwycke, are good for thoſe which comming from the ſouthwardes, by reaſon of contrary winds can not get to the great Warders.

A little more ſoutherly then the Coperwycke, on the eaſt ſide of the Liet to the northwardes of the Bock, lyeth in north into the land, a Sound, which ſheweth it ſelf (when you come from the ſouthwardes) much broader then the right fareway, ſo that thoſe that are not there very well acquainted, ſhould not think otherwiſe, but that is was the right channell, and ſo ſhould lightly go up a contrary way, Therefore it is neceſſary & needfull to ſayl cloſe alongſt by Schuytenes, and not goe off from the weſt ſhoare, untill you come thwart of Coperwycke, then you ſhall be within the point of the foreſayd Sound.

About



Bergen

Het groote Eylandt

Duytsche mylen 15 in een graat

Spaensche mylen 17½ in een graat

Eng. en Fra. mylen 20 in een graat

Pas... Liedt van

BE...GEN,

Begin... Schuitenes tot ... Bergen.

W E G E

De Bommel

Oosdize

Slechte Sa...

Longholm

De Bommel

Sichtsom

Nou...

De Bommel

D'Blocx

Bommel hoofd

Bommel haven

Bommel Sandt

Bommel

Volgerrae

Beelhaven

Alemaert haven

Syck

Solmer Veerd

4

5

6

7

8

3

4

5

6

7

2

3

4

5

6

NOORD

Paeschaert vande Custe van

BERGEN,

Beginnende van Schuitenes tot Bergen.

Eylandt

Duytsche mylen 15 in een graat

Spaensche mylen 17½ in een graat

Eng. en Fra. mylen 20 in een graat

W E G E N

De Bommel

Oosdijc

Longhoek

Slechte

De Bommel

Sichtroom

Noo

Schui

Boschhoven

De Bosch

't Lief van Bergen

Copernagel

Copernes

Volgerres

hooft

Syck

Bommel haven

De Bommel

D'Bloex

Bommel Sondt

Withers

5 6 6 7 6 7 8

10



About a great halfe league by north the great Warder, lyeth Notou, there ſtandeth a little white church and ſome houſes; thwart of it in the Bay is alſo good anchoring for northerly winds, and good road for them which are bound to the northwardes. Likewiſe it is good anchoring by north the poynt of Notou, for them which are bound to the ſouthwards. Almoſt at the north end of Schuyteneſſe, is alſo a road, called Sichſtreame, where is alſoo good lying.

Notou.

At the north end of Schuyteneſſe lyeth a little Iſland, when you ſayle up or downe the Lieth, you can ſee through betwixt them into ſea. At this Iſland is alſo a good road under a rocke, or Iſland, called Wybrants-eye, there it is good anchoring for all windes.

Sichſtream.

Wybrants-eye.

Betwixt that foreſaid Iſland and the maine land, you muſt ſaile through a narrow ſtrait, which is but a little more then a ſhippes length broad; on the eaſt ſide where of, which is on the ſide of the maine land, there lyeth a little rock, or ſuncken rock, therefore you muſt ſaile cloſe by the weſt ſide, that is cloſe alongſt by the Iſland for to avoyd the foreſayde rock.

From Wybrants-eye over the Bommel to the Blocx, the courſe is northnorthweſt, but firſt ſomewhat more weſterly, about two leagues, betwixt them both it is on the weſt ſide all broken land, great and little Iſlands and rockes. *About* halfe wayes betwixt them both goeth a channell unto ſea, where men doe ſayle much in & out, and it is cleane, broad, and wide. He that will runn out there (comming from the northwards) may eaſily eſpye it, when he is a halfe league paſt the Blocx. On the weſt ſide lye two little Iſlands or great rockes, which ſhew much greater then the other rocks, theſe you muſt leave on the larboard ſide, and run out by them ſouthſouthweſt into the ſea.

The Bommell.

He that will runne in here out of the ſea, he ſhall (when he commeth to the end of *Schuyteneſſe*) ſee many little Iſlands or rocks, he muſt ſaile paſt al theſe, untill that he get ſight of thoſe foreſayd two great rocks, and then in by them leaving them on the ſtarboard ſide; & ſo he ſhall come ſomewhat to the ſouthwardes of the Blocx or Longholme into the Lieth.

The Blocx.

The Blocx are 2 rockes, lying very neare even with the water; which you muſt leave on the larboard ſide, in ſayling up, and runne cloſe alongſt by the eaſt ſhoare, through betwixt the Blocx and Longholm. Longholme lyeth a little above the Blocx, within it is a good Haven, where is good lying. A little to the northwards of it lye 2 rockes more, thwart of them lyeth a ſuncken rock, which you muſt avoyd.

Longholm.

From the Blocx alongſt over the Bommel it is yet two leagues, firſt north, and then northnortheaſt, all alongſt by the land of Bommel-head, the ſouth end of this land is a high ſteepe poynt, called Bommel-head, to the ſouthwards of it runneth a channell weſtſouthweſt into the ſea, called Bommell-ſound. This channel is eaſy to bee known, comming in out of the ſea. The land of Bommel-head is about 4 leagues long, and the firſt long Iſland to the northwardes of Schuyteneſſe, it is altogether low plaine land except on the ſouth end, which is ſo ſteep a poynt, as if it were hewen right off with an Axe. About the middeſt between both ends of this Iſland (on the ſea ſide) lyeth a very high round hill, called *Sick*, of faſhion almoſt like a ſugerloafe or a mans hat, and lyeth farre above all that low land, which you may eaſily ſee at both the ends of this Iſland, and alſo further, where by it is very eaſy to be knowne.

Bommell-ſound.

Sick.

For to ſayle into this foreſaid channell out of the ſea, you muſt bring that ſteepe poynt of Bommell-head eaſtnortheaſt, or ſomewhat more northerly from you, and ſaile then towards it. And then you ſhall leave a great many little Iſlands and rockes on the ſtarboard ſide, and the foreſayd poynt on the larboard ſide, and cloſe in about by it to the northwardes.

Bommell-head.

A little about this poynt of Bommel-head, on the Innerſide lyeth a Haven, called Bommel-haven, there lyeth a rock before the mouth of it, and alſo a ſuncken rocke betwixt that rock and the north poynt of that Haven: He that will go in there, muſt go into the ſouthwards of the rock, in betwixt the ſouth poynt & the foreſaid rock, leaving the rock on the ſtarboard ſide of him. *So* ſoone as men are within the Haven, they muſt let fall their anchor, within it is broade and wide, and men lye there landlockt for all winds.

At the end of the Bommell lyeth Munſterhaven in the land of Bommell-head, on the weſt ſide of the Lieth, even about the poynt. This is alſo a good haven for them which are bound to the ſouthwardes, and by reaſon of contrary winds cannot get further, there ſtandeth a little white church, thwart of it men muſt anchor in ten or twelve fathom.

Munſterhaven.

From Munſterhaven to Beulſhaven it is north an Engliſh mile, there is alſo good anchoring for ſoutherly windes, further it is north, ſomewhat eaſterly to Volger-roade, before it lyeth a little Iſland, under it or by it, on the one ſide or other men may anchor for all winds, Men may alſo ſayle round about it, and run in and out at both ſides of it, if they will.

Beulshaven.

Volgerroad.

From Munſter-haven to Bremer-holme the Liet lyeth north, ſomewhat eaſterly about two leagues, there the Liet is devided into 2 parts, to witt, into the Old and the New Liet: The old Liet goeth through to the eaſtwards of Bremer-holme and the Iſland that lyeth to the northwards of it, but the new land alongſt to the weſtwards of it.

Bremerholm.

The Olde Liet is not well to be uſed by them, which are not there very well acquainted, alſo great ſhips that draw twelve or thirteen foot, may not goe through there.

Old Liet.

Somewhat more then thwart of the middeſt of Bremer-holme, in the narrow of the Old Liet, lyeth a ſhoale where upon is no more then thirteene or fourteene foote water. A little to the northwardes of it on the eaſt ſhoare lyeth a bay called Ingeſound, where is good anchoring: there lyeth alſo a bay on the weſt ſide, halfe wayes betwixt that foreſayd ſhoale & Bremerholm, where men alſo may anchor.

The New Liet is broad & deepe enough. Thwart of Bremer-holme, in the fareway, neareſt the weſt ſide lyeth a ſuncken rock, where of you muſt take heed. *For* to avoyd it, you muſt marke the Iſland before Volger road. If you keep it ſo that you may ſee it without the north-poynt of Volgher-roade, then you cannot come too neare that ſuncken rock: but if you bring that Iſland behind the foreſayd poynt, ſo that you cannot ſee it, you ſhall without fayle, ſayle right upon it; you muſt obſerve theſe marks as well in ſayling up as in ſayling off.

New Liet.

In the middeſt of the New Lieth lyeth Ruighe-holme, there men lye with ſhippes faſt unto two *Rings*: the one is upon the Iſland, and the other upon the poynt to the northwards of it, where they bring out Cables to.

Ruigeholme.

From the New Lieth to the poynt of Redholme, it is northnortheaſt a halfe league, betwixt them both goeth out the Soltmerfioerd weſtſouthweſt into ſea, which is a fayre broad and large chanell. On the ſouth ſide lye ſome ſuncken rockes, but if you runne out amidſt the channell, you can take no hurt of them.

Redholm.

At ſea men doe know this Soltmerfioerd by that foreſayd high and round hill Siecke, which is very eaſy to be knowne, and lyeth two leagues to the ſouthwards of it, about halfe wayes betwixt this Sound & Bommel-ſound. The land on the ſouth ſide of Soltmerfioerd towards *Sick*, are ſmall white rockes, which you muſt leave on the ſtarboard ſide, and runne in ſo amidſt the channell eaſtnortheaſt, and then you can take no hurt of thoſe foreſayd ſuncken rockes, lying on the ſouth ſide of this channel. There lyeth alſo a ſuncken rocke at ſea before this *Sound* on the ſouth ſide, a little off from the north

Soltmerfioerd.

north poynt of the land of Bommell-head, whit hard winds out of the ſea, the ſea breaketh very much upon it, but it lyeth at leaſt five or ſix fathom under water.

When as you come in there, you have Redholm on the larboard ſide, and you muſt run northeaſt alongſt by it, untill you come about the foreſayd poynt.

From the poynt of Redholme to the Narrow it is north, & through the Narrow northnorthweſt & north & by weſt at leaſt a halfe league. In this ſtrait it is ſo narrow, that you can but even turne through it, on the weſt ſide of the ſtrait lyeth a little Iſland, thwart of it is good anchor-ground in 13 & 14 fathom.

Reine Knaep. From the ſtraite to the Reine Knape, the courſe is northweſt, and by north two leagues: this is a little Iſland without trees, cleane round about, which you may ſayle about on both ſides.

Deepe Sound. Thwart of Reine Knaep on the eaſt ſhoare lyeth Deepe-ſound, a good haven for them which are bound to the ſouthwards, the mouth of it is narrow, and alſo but three fathom deepe, but within it is broad & large, and twenty fathom deepe. Alongſt to the weſtwards of the Reine Knaep, it is broadeſt, to the eaſtwards lyeth a point, & by it a little Iſland you may ſayle through betwixt the point & the little Iſland. From the Reine Knaep to Bagholme, the courſe is north & by eaſt a great league: Betwixt them both lye ſome Iſlands and rocks, all which you muſt leave lying on the ſtarboard ſide, there you may at divers places ſayle through and within theſe Iſlands and rocks, and at laſt come out againe by Bagholme into the Liet, but it is not to be done but for them that are there extraordinary well acquainted. Men might lightly get in amongſt theſe Iſlands and rockes, ſo that they ſhould not know how to come out againe. At the eaſt ſide of Bag-holm men may anchor, but there ſhooteth off a little ledge of rocks from the north end, whree of they muſt take good heed.

Crab-kerk. From Bag-holme to Crab-kerke it is north about there quarters of a league, this is an indifferent haven for ſoutherly windes, but it is little, there can lye no more then two or three ſhips.

From Crabbe-kercke to Bock up Ra, it is north, ſomewhat eaſterly a league, betwixt them both runneth out the Croſſe-ſound, or Cruyſvoert weſtſouthweſt, and ſouthweſt and by weſt into ſea, which ſound is very eaſy to be knowne at ſea, by three hils (almoſt like the Drommels on the eaſt ſide of Norway, but not ſo high) which lye there abouts within the land, which are alſo North-Drom-mels. called by ſome the north Drommels, when they are northeaſt, or thereabouts from you, then you are upon before the Croſſe-ſound, Before the mouth of it lyeth a little Iſland neareſt the ſouth ſide, from which lye off ſome rockes to ſeawardes, the broadeſt and largeſt channell is alongſt to the northwards of it, you may wel alſo ſayl through to the eaſtwards of the Iſland betwixt it and the land, but there it is narrow, yet cleane & cleare without any dangers. When you are within it, you muſt goe in alongſt eaſtnortheaſt and northeaſt & by eaſt, & ſo ſhall come into the Liet againſt Cruyſenes, a little to the ſouthwards of Bock up *Ra*.

Bock up Ra. Bock up Ra is a little Iſland which you may ſayle about on both ſides, alongſt to the weſtwards of it is the common fareway, and alſo deepeſt. When as you ſayle about to the eaſtwards of it, and come to the north end of Bock, there it is very narrow, and there right in the fareway (ſomwhat nearer the eaſt ſhoare them Bock) lyeth a ſuncken rock, there ſtandeth allwayes a pole upon it, for to avoyd it, you muſt leave it on the ſtarboard ſide, and run alongſt to the weſtwards of it. Betwixt this Rock and Bock, it is no deeper then ſixteen foot. Right to the weſtwards thwart of Bock lyeth an other Iſland, under it you may alſo anchor in Bock-lieth. To the weſtwards of this Iſland goeth through the Cobbe-lieth. Cobbe lieth, which men doe ſayle through with bare winds, or when they muſt turn through, becauſe it is broader then on either ſide of Bock up Ra.

From Bock to the Wattingſtream it is north a league, there you cannot ſayle amiſſe. If you doe not ſayle againſt the land, for there lye no dangers, except at the weſt ſhorre lyeth a ſuncken rock cloſe by the land, whereupon remaineth at low water about ten foot water. Upon the end of Wattingſtream, the courſe is northweſt about a ſhot of a caſt peece, or a quarter of a league and then you come thwart of little Alefioerd, which is a haven on the weſt ſhoare, where is good anchoring both for a north and ſouth wind, under a high round Iſland, where you ſhall lye land-lockt. From thence to the Reeſtoone it is north about two leagues, betwixt them both on the weſt ſhoare lyeth great Alefioerd which is alſo a haven both for northerly and ſoutherly winds, thwart of it the fareway is about two musket ſhot broad. The Reeſtone is a rocke under water, lying by the poynt, where the two high hills ſtand, which men doe call the Lethoorns, theſe are two high ſharp hilles, which men may ſee farre off, as they ſayle op or off that Lieth. Upon the *R*eeſtone ſtandeth allwayes a Pole, that thereby men may avoyd it. You may alſo ſayl alongſt to the eaſtwards of it, but to the weſtwardes of it is broadeſt, and the right fareway, over againſt it on the weſt ſhoare lyeth Knorwyck, a haven where men may alſo anchor.

Watting-ſtream. Little Aliſ-oerd. Reeſtone Great Aleſ-oerd. Lethorns. Knor-wike.

From the Reeſtone to Werckeneſſe, the courſe is eaſtnortheaſt about a quarter of a league, and then you leave the Iſland Aſland lying on the larboard ſide to the northwards of you, in it lye alſo two havens where you may alſo goe to anchor, the one called Struys-haven, and the other Schoon-haven. To the weſtwards of Aſland you may ſayle to Jelteſioerd, & run out there about northweſt into the ſea.

Werc-keneſſe. Struys-haven. Schoon haven. Jelte-ſioerd.

When you come out of the ſea into Jelteſioerd, then you come into the weſtwards of Aſland againſt the Reeſtone into the Lieth.

At the ſouth poynt of Aſland lyeth Jelteſchaer, a little round Iſland or rock, whereupon ſtandeth a great Iron ring, when as men come up the Lieth and with calmes are in danger to be driven with the current to the northwards along by Aſland, then they bring with the boat a cable faſt on it. Men may wend round about the foreſayd rock without any danger.

Jelts-ſchar.

From Werckeneſſe to Horneſſe, it is eaſt a little diſtance: when you come by it, you may ſee the towne of Bergen lye before you, you muſt anchor before it in the Wage, in 11, 12 or 13 fathom.

Hor-neſſe.

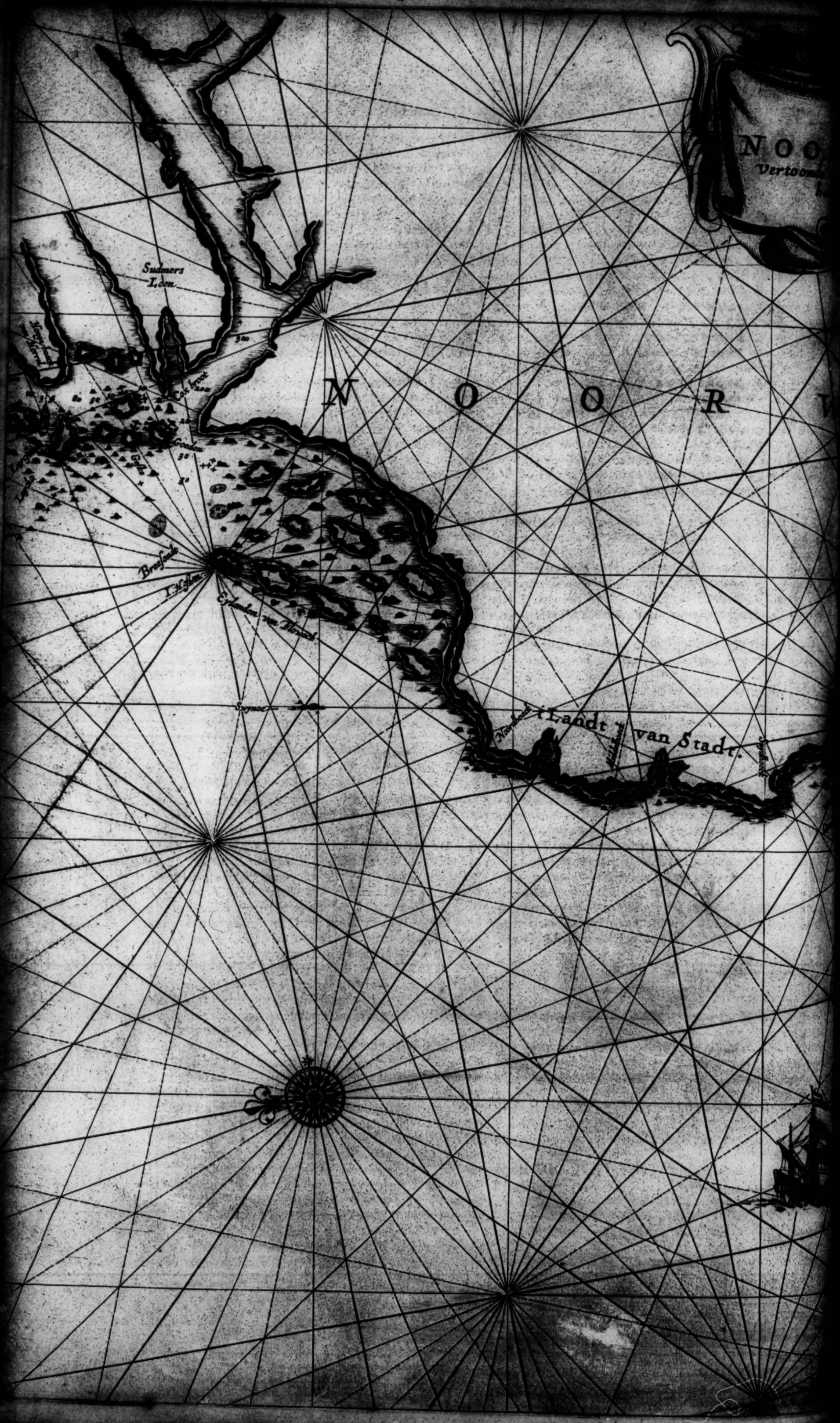
To the northwards of Aſland lieth the Iſland Harle, which is about five leagues long; when you come from the northwards, you may runne about it on both ſides, and ſo come into the Waghe of Bergen. The Harleſioerd goeth out about north and by weſt, and northnorthweſt betwixt Aſland and the land of Harle.

Harle

How theſe lands doe lye one from the other, and from other land.

From Schuytenes to Bommelſhead northnorthweſt ſomewhat northerly 7 leagues.
From Bommels-head to Cruyſoort n. n. w. 9 leagues.
From Cruyſoort to Harle northnorthweſt 13 leagues.
From Schuytenes to the Outſeers weſt, and weſt and by north 4 leagues.
From the Outſeers to Jelteſioerd, or the Wage of Bergen north 26 leagues.
From Schuytenes to the Flye ſouth and by eaſt ſoutherly 106 leagues.
From Schuytenes to the Teſſell, ſouth and ſouth & by eaſt, 112 leagues.
From Schuytenes to Walcheren ſouth 138 leagues.
From Schuytenes to the Holms before Yarmouth ſouth & by weſt, or ſomewhat more weſterly 113 or 114 leagues.
From Schuytenes to Flambrough head, ſouthweſt & by ſouth 104 or 105 leagues.

From


Sudmers
Leen
Goudem
Brosaak
T'Hoff
Eylandon van Hoorn
Seynoe
Noordt Landt van Stadt.
M O O R

G E N.

Berge

Rachter

Sandgat

Oosterre

Olde fout

Olde fout

Olde

Wtvoer klippen

Duytsche mylen 15 in een graade

Spaensche mylen 17½ in een graade

Engelsche en Fransche mylen 20 in een graade

From Schuytenes to Tinmouth, the courſe is ſouthweſt, 99 leagues.
From Schuytenes to Boeckenes w. & by ſouth ſoutherly, 72 leagues.
From the Outſeers to the Fly ſouth & by eaſt, 106 or 107 leagues.
From the Outſeers to the rocks Outweers north and by weſt, ſomewhat northerly 43 leagues.
From Jeltefioerd or the Wage of Bergen to Hitland, weſt 63 leagues.
From Jeltefioerd, or the Wage of Bergen, to the North-end of Hitland weſt & weſt & by north 63 leagues.
From Schuytenes to Hitland weſtand by north, & weſt-northweſt 73 leagues.
From Schuytenes to the north end of Hitland weſtnorth-weſt ſomewhat northerly 80 leagues.

How theſe lands doe ſhew themſelves at Sea.



Thus ſheweth the Boek, when you are to the ſouthwards of Schuytenes before the Lieth.



Thus ſheweth the hill Sick, when you are to the northwards of Schuytenes.

The eighth Demonſtration,

Where in

The Coaſt of Norway betweene Jeltefioerd and the high point of Horrel is shewed.

FRom Jeltefioerd, or the Wage of Bergen, to Olde, the coaſt lyeth northnorthweſt, and north and by weſt about 16 leagues, that is all broken land, with many rocks, where men may ſayle through within them. The Narway Barkes come off from Stade all alongſt through that broken land & rocks, & within the Iſland Harle unto Bergen.

About 4 leagues and a halfe to the ſouthwards of Old, lyeth a great row of rocks, lying 3 or 4 leagues without the other rocks, thwart off from the ſhoare to ſeawards, called the Outweers.

Outweers.

Betwixt them & Old lyeth a good Haven, called *South-foort*, there lye 3 Iſland before it, where men run in betwixt them both alongſt into the Haven.

Olde.

Olde is a high rock, a good wayes from the land, and looſe from the other rocks by the land, but hath ſome ſmall rocks lying about it, there lyeth alſoo a row of rocks, a good wayes off from it ſouthweſt into the ſea.

About northweſt and northweſt and by north from Olde lye 2 rowes of rocks, where of ſome lye above and ſome under water. Whenas you are either to the northwards or to the ſouthwards of Old, it doth ſhew it ſelfe with a great ſaddle, in 2 hommockes, and going downe round on both ſides, but being thwart off, or weſtwards from it, then it lyeth in one round hill, almoſt like Coll. You may (comming from the ſouthwards) runne in about the eaſtwards within Old, northeaſt to Oldeſound, & come out againe to the northwardes of Olde. Foure leagues to the northwardes of Olde-ſound lyeth Kyn, alſo a great rocke, which men may ſayle round about, & ſheweth it ſelfe with 2 ſharp Hommockes, almoſt like a Cowes clawe, or Biſhops Myter.

Kyn.

Betwixt Kyn & Olde goeth a great Sound into the land, upon which lye two twons, Waldres & Eaſterdal. Northweſt and by weſt from Kyn lye three or foure rocks, and alſo ſome ſuncken rocks under water. *Southweſt* and by weſt about 3 leagues off from it, lye alſo ſome rockes above, and ſome under water.

Waldres. Eaſterdal.

Three or foure leagues to the northwards of Kyn lyeth Ornael, alſo a great rock, which ſheweth it ſelf in one great high round Hill. Three leagues, or three leagues and a halfe to the northwards of it lyeth the ſouth poynt of Stade. But Ornaell and Olde lye about north & ſouth 7 or 8 leagues a ſunder.

Ornael

Betwixt Ornael and the ſouth point of *Stade* goeth in a great broad ſound, from whence men may ſaile through within the broken land to the ſouthwards to Bergen. A little within the ſouth point of Stade is a Bay, where men may goe to anchor, thwart of a ſea-beacon, & ly ſheltred for a weſt winde. The land of Stade lyeth from the ſouth-point to the north poynt northnortheaſt, & ſouthſouth-weſt which is a whole main coaſt but ful cloſe alongſt by the ſhoare, with many ſmall rocks, but none that men may ſayle about with in them for to have any ſhelter for the ſea. The Norway Barkes of all places to the northwards of it, yea and all thoſe which come off from the North Cape, can ſayle all alongſt the coaſt of Narway unto Berghen, through within the rocks, except thwart of this land of *Stade*, there they muſt runne a ſeaboard through the Sea.

North point of Staden.

Havens on Stade.

Between theſe two foreſayd poynts are alſo two little havens where men may ride, but a little or nothing uſed.

To the northwards of Stade the Iſland lyeth with many Iſlands northeaſt to the broad-ſound nine leagues. About halfe wayes lyeth a little Iſland or rock, called Swynoe (that is Hogges-Island) a league from land without the other Islands of Flowach. When you are cloſe by the north poynt of Stade, and go on northeaſt you run through within that little Island Swynoe, but with a northeaſt and by north courſe about a ſeaboard of it.

Swynoe.

He that is bound to Roemſdall, or into the Sounds of Sudmer, muſt runne into the Broad-ſound, which goeth in at the ends of the Islands of Flowach eaſt and eaſt & by ſouth, the outermoſt of theſe Islands is called Haſſen. When you come to the end of thoſe foreſayd Islands, you ſhall ſee eaſt from you about two leagues, a great high ſhort Island, called Goedeu, or of ſome God-ſhe-ſand, and a little to the ſouthwards of it ſomewhat further in a great black rocke, of faſhion like a hay-cock, or almoſt like a ſuger-loafe, it is called by the ſaylers the Coockes-broad: ſayle in right with it, but bring not that foreſayd rock to or under that Iſland, but keep it clear off without it: for els you ſhould ſurely ſayle upon the foreſayd ſuncken rockes, which lye under water at the north ſide of the broad-ſound.

Broad-ſound.

Goedeu

From the Island Goedeu or Godſche-ſand runneth off alſo a little riffe, to the ſouthwards, or towards the ſouth-eaſt from it. When you come by that Island runne about that little riffe, in betwixt it & the foreſayd black rock, and anchor a little within that riffe, under Goedeu,

runne not farre within it, for to avoyde a ſuncken rock, which lyeth ſomewhat further in, not farre from land, there ſtand two little wardes upon the ſhoare, a little within the riffe, for knowledge of the roade.

Behinde, or to the northwards of Godeu lyeth the little Iſland Geske: upon it ſtandeth a little Church on the ſouth ſide, before it men may alſo anchor in eight or tenne fathom cleane ground. Geske

A little within Goedeu, on the eaſt ſide of Geske lyeth another Iſland, greater then Geske, called Walderoe, on both ſides of the ſoutheaſt poynt of that Iſland men may anchor in good cleane ground, and lye land-lockt for all windes. Walderoe.

From thwart of Geske and Walderoe lyeth a great multitude of Rocks northweſt ſo farre into ſea, that comming a ſeaboard by Swynoe with a northeaſt courſe, you ſhould bee farre within them.

He that commeth from the northwards may ſayle by weſt alongſt by theſe rocks to Goedeu, and leave the a foreſayd ſuncken rocks (lying on the north ſide of the Broade ſound) on the ſtarboard ſide of him, and runne in about by the poynt of Goedeu, as hath been beforeſayd.

You may alſo run into the northwards of Goedeu, to wit in betwixt Goedeu and Geske, and anchor within Geske, or under Walderoe, but it is not wel to be done, but for them which are there very well acquainted.

There lye manie Rocks, ſome above, & ſome under water, where of men muſt take heede. In at the Broade ſounde is the beſt and ſureſt.

For to runne from Walderoe to Roemſdale, go on to the northwards, alongſt by the great Iſlands Luycko, it is in that fareway, 10, 20, 14, 16 and 18 fathom deepe, but even paſt Luycke runneth a ſtone riffe thwart over the fareway, on againſt the poynt of the maine land, you muſt thereabouts edge off from the Iſland on the larboard ſide, & run indifferent cloſe alongſt by that point of the maine land on the ſtarboard ſide, & then you runne over the deepeſt of that Stoneriffe, to witt, in 3 fathom or thereabouts, as ſoone as you ſhall be over it, it is againe verie deepe of 10, 20 and preſently an hundred and two hundred fathom. Runne on ſtill by the land on the ſtarboard ſide, and verie cloſe alongſt by it, and leave all the Iſlands that lye on the larboard ſide, & ſo you ſhall come unto the River of Roemſdale.

Towards the ſoutheaſt from the foreſayd Iſland Goedeu or Godſche-ſand goeth a great deepe river into the land, to Sickule, Honighpale, & other lading places more.

How theſe lands doe lye one from the other and from other lands.

From Jeltefioerd or the Waghe of Bergen to the Rocks of Outweers, northnorthweſt, and n. & by weſt about 11 or 12 leagues.

From the Outweers rock to Old, northnorthweſt, & n. & by weſt betwixt 4 & 5 leagues.

From Old to Cyne n. and by eaſt, and northnortheaſt 4 leagues.

From Olde to Ornael north and north and by eaſt 7 or 8 leagues.

From Ornael to the ſouth poynt of Stade northnortheaſt, 3 leagues.

From the ſouth poynt of Stade to the north poynt, n. n. eaſt 8 leagues.

From the north point of Stade to Swyno or Swynooſt northeaſt and by north 4 leagues.

From Swynoe to the outermoſt of Flowach, or the broade ſound, northeaſt and by eaſt 4 leagues.

From the north poynt of Stade to the Iſland Heſſen, or the Broade-ſound northeaſt 8 leagues.

From Heſſen to Goedeu eaſt, and eaſt and by ſouth 3 leagues.

From Swynoe alongſt without the Roemſdaels ſchares to Boede, the courſe is northeaſt and by north and northeaſt.

From Stade to the north-end of Hitland weſtſouthweſt 66 leagues.

From Stade to the eaſt poynt of Iſland, weſtnorthweſt, 200 leagues.

From Stade to Greeneland northweſt about 330 leag.

Of the Tydes and Courſes of the ſtreames.

Betwixt Berghen and Stade the water riſeth & falleth, but it keepteth no certaine tyde, a ſouthſouthweſt and n. northeaſt moone maketh there moſt full ſea.

Betwixt Stade, Luyckeſound & Boe a ſouthſouthweſt and northnortheaſt moone maketh high water.

Heights.

The Outweers-rocks lye in	60 degr. and 53 min.
The Iſland Kyne in	61 degr. 30 minutes.
Stade in	26 degrees.
Broad-ſound or the Iſland Goedeu, in	62 degr. 40 min.
Luyckſound in	62 degrees and 55 minutes.

How theſe lands doe ſhew themſelves at Sea.



The Land about Northfoert & Southfoert, when it lyeth eaſt & by ſouth from you.



Thus ſheweth the Iſlands Ornael, Kyne & Olde, to the ſouthwards of Stade.



When the ſouth point of Stade lyeth northeaſt & by north from you, then it ſheweth with the land from thence ſouthwards within Ornael, Kyne, & Olde, like as it pourtrayed in this & the figure following.



This followeth the former figure.



When the poynt of Stade lyeth ſouthſoutheaſt 8 leagues from you, it ſheweth thus.



Caarte
van
NOORW
vande hoeck van Hor
Momendael, waer
wort het Liet va

N O O

Slot Drontem

Holm

Bodsyck

Buyssen

Vrkadael

Roosberg

Ryssloosser

Lemsyck

Sille

Schoorn

Hogeyck

Aelsmeer

Smeerdyck

H E L L E N.

Schoorfyrck

Dronsfiort

Carlscroon

Noorder Kimmen

Zuyder Kimmen

Eersfiort

Noordtsoord

Schiphol

Vlieter

Vlieter Sant

Wieringer Soord

Glaen

Texel

Marsdiep

Mommenhoef

R W E G E N.

Hoogh hoeck van Noorw.

Rivier van Roomsdal

Noorthorn

Lange fiorde

Hoogh hoeck

Trondel

Clipen

Smeeg schaer

R.

Summer hoek

Summer hoek

I. Edelen

Bar

Beerschaer

Rooy Klooft

Schaeren

Rooy Klooft

Schaeren

Trondel

Trondel

Mastholmen

Duytsche mylen 15 in een graade

Spaansche mylen 17½ in een graade

Engel en Frã. mylen 20 in een graade


К М Е С Е И



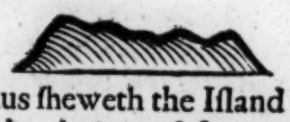
When Stade is ſouthſoutheaſt from you, and Goedeu eaſt 4 leagues, then the Land betwixt Stade & the Broad-ſound like as is pourtrayed in this & the figure following, and then you are open before the Broad-ſound.



This followeth the former figure unto Stade.



The forme of Iſland Luycko, when it is eaſt & by north from you.



Thus ſheweth the Iſland Goedeu, being eaſt from you.

The ninth Demonſtration,

Where in

The Liet of Dronten is shewed.

TO the northwards or north eaſtwardes from Geskelye (amongſt a greate manie other rocks and little Iſlands) five greate Iſlands: the firſt called Luco, which is a high Iſlands, like as alſo the ſecond, betwixt theſe two goeth in a chancell about ſouth-eaſt called Luyckſound.

Luco.

Luyck ſound.

Upon the third called Harnſoe lyeth alſo a high hill, but it is at both endes ſomewhat lowe.

Harnſoe.

The fourth and ſmalleſt called Lemſoe or the lowe Iſland ſheweth it ſelfe in 2 or 3 lowe hommocks.

Lemſoe.

The fifth called Flemſeu, or the Iſland, is a great and lowe Iſland, but ſeemeth little to ſee to at ſea, becauſe there lyeth but one hommock upon it (not verie greate) and of faſhion as the roof or cabben of a Hoye, or the weſtend higheſt within the eaſt poynt of that Iſland is a good roade in a bight, where men lie landlockt for all winds.

Flemſeu.

Roofe Iſland.

To the northwards or eaſtwards of Flemſeu or Roofe Iſland, goeth in a channell called Nogwe Fioert, lying in eaſt and by ſouth, at which men may runne into Roemſdale.

Without theſe foreſayd Iſland off from Luco unto Boede, lyeth a great multitude of out rocks, great and ſmall, called the Roemſdales Schares.

Roemsdales. Schares.

Eaſtwards from the Roofe Iſlands, or Flemſeu, lyeth (amongſt other rocks and little Iſlands) the Iſland Lever, which men may ſayle about on both ſides, whether they be bound outwards from Roemſdale to Bereſound or Boe, or inwards from Boe or Bereſound, and will runne through the foreſayd Iſlands.

Lever.

Bereſound.

Bereſound is a Haven within ſome rockes even to the ſouthwards or weſtwards of the poynt Boe, there it is good lying, but not good to come into without a Pilot, or ſome one that is there well acquainted.

Boe.

Boede is an out-point, with a neck or ſmall point of land, faſt to the maine land, alongſt to the ſouthwards of it men may run in and up, to the ſouthwards to Bereſound or els goe to anchor in a bay on the north ſide behind Boe, by ſome houſes, where they may lye ſheltred for a weſt winde.

From Boe to Stemneſheſt, the coaſt lyeth about n. e. and by n. 2 leagues, betwixt them both about half wayes lye many ſmall lowe black Out-rocks, as if they were ſowne alongſt the ſhoar, called the Stoppels, betwixt them and the maine land you cannot ſayle through with great ſhips without great danger. The Norwaye Barckes runne alongſt with in them, and alſo anchor there within, under a rock, which is ſomewhat greater then the reſt, and lyeth about the middſt of the Stoppels (or ſomewhat nearer the main land) called the Eartholm.

Stoppels.

All the Iſlands betwixt Broad-ſound or Flowach and Boe, belong under Roemſdale.

From Stade to Stemneſheſt (or Stemmeſnes) the courſe is alongſt without the Iſlands northeaſt and by n. about ſix and twenty leagues, the land betwixt them both is called the Gouvernement of *R*oemſdael.

Stemneſheſt is a high point eaſy to be know, it ſheweth it ſelf (when as you get ſight of it, comming from the ſouthwardes or the weſtwards) in two Hommocks thwart of it goeth in the Lieth with divers entries.

Stemneſheſt.

About a ſhot of a caſt-peece from the point lyeth a black round rock, altogether alone, not very great, called the black Oxe. Betwixt it & the point goeth in an entrie, called after the foreſayd rock, alſo the black Oxe, northeaſt and by eaſt, it is not verie wide, and upon the ſhoaleſt 4 or 5 fathom deep at low water, the nearer to the Oxe the deeper, & the nearer to the main land the ſhoaler water.

Black Ox.

A little within the Rock, (the black Oxe) lyeth an other great rock or Iſland, pale of coulour, called White-holme, which you muſt leave (in ſayling) alſo on the larboard ſide, you cannot ſayle through betwixt it & the black Oxe, becauſe from the one to the other it is all full of rocks ſome above & ſome under water.

A little within or to the end of Whiteholm lyeth a ſunken rock, which you muſt leave alſo on the larboard ſide.

Whiteholme. Suncken Rock.

In calm weather or ſmooth water you cannot wel ſee it, but when it doth blowe any thing hard, you may well perceive it by the breaking of the ſea upon it. On the ſtarboard ſide within White-holm, lyeth a great multitude of rocks, as if they where ſowed along the ſhoare, amongſt theſe rocks a little within or to the eaſtwards of the point of Stemneſheſt lyeth Smeerholme, an Iſland, where men may ride under, and lye ſheltred for all winds, except with eaſt & northeaſt windes, which blowe there in open, with thoſe windes you cannot alſo come out there, neither with ſouthſouthweſt, ſouth, ſouthſouthweſt, & ſouthweſt winds, you cannot alſo come in there. You muſt ſayle in there from the northwards, behind the Iſland. In the going in (which is not above a cables length broad, 8 or 10 fathom deepe) lyeth a little round rock, at high water, about a fathom above water, by which you may runne about on both ſides.

Smeerholm.

Northnorthweſt about a halfe league from the black Oxe lyeth alſo a greater and broader, but a lower rock, called the Vogel, which at high water lyeth a little above water, but with a ſpring-tyde the ſea runneth alongſt over it. Betwixt it & the black Oxe there ſeemeth to lye in a broade and wide channell, but betwixt them it is full of ſuncken rocks and foule grounds under water: When

The Vogel.

it is ſmooth water, it is in no wiſe good to runne in there, but in foule weather and with a growe ſea, and that you cannot doe otherwiſe, you might runne in there by the breaking of the ſea.

Mew-holme. A great half league northnorthweſt from the Voghel lye yet ſome rocks, lying to the eaſtwardes, called the Mew-holmes, betwixt them and the foreſayd Rock the Voghell goeth in a broade & large channell, verie cleane without any dangers, which (after the Rock is alſo called the Vogell, there men may ſee al that can doe hurt. The marcks for to finde this channell) comming out of the ſea are two hills, verie eaſy to be knowne, which lye from thence eaſt and eaſt and by north within the land. The weſtermoſt is a hill ſomewhat low and round of faſhion, allmoſt like a flat cap, called the Clapmus. The eaſtermoſt is a high ſteepe ſharpe Hill, above on the one ſide with a cutt, like as a ſteppe, called Manghelbergh. When theſe are one in the other, then they are about eaſt & by north from you, and then you are alſo right open before this channell.

Clapmuts and Mangelberg

For to ſaile in there, keepe theſe two foreſayd hills one in the other, and ſayle in right with them eaſt, and eaſt & by north, or (when as you come within the Vogel) ſomewhat more eaſterly, ſo that you have the foreſayd Hills out a head a little on the larboarde ſide, untill that you come by the main land, and then eaſtnortheaſt alongſt by the ſhoare, if you be bounde to Dronten) unto the Iſland Edou or Edoe.

About a league within the Vogel lye two rockes, the weſtermoſt is high and ſomewhat round, the other is low and alſo round, and lyeth to the eaſtwardes from the firſt, towards the land, you ſhall runne with the a foreſayd courſe of eaſt & e. & by north of from the Vogel, about a ſhot of a caſt-peece alongſt to the ſouthwardes of the 2 rockes. About half wayes betwixt them and the Vogell, (but neareſt the 2 rochs) lye two ſuncken rocks, theſe you leave with the ſame courſe alſo on the larboard ſide, you may ſee the ſea alwayes breake upon them, except in very ſmooth Water.

Two ſunken rocks.

You may alſo ſail through betwixt theſe two foreſayd Rocks and the Mewholmes, to wit, alongſt to the northwardes of the rocks, untill you come into the Liet, leaving theſe 2 rocks on the larboard ſide, and the Mewholms on the ſtarboard ſide.

Alongſt to the northwardes of the Mewholmes and thoſe two foreſaid rocks lyeth alſo a channell where men may ſayle through into the Liet, then you muſt leave theſe 2 rockes to the ſouthwardes on the ſtarboard ſide, and ſome other rocks to the northwards of them on the larboard ſide, and ſo come alſo into the Liet.

A bout three quarters of a league within theſe two foreſayd Rocks, lyeth a great ſuncken rock, right in tho middeſt of the fareway e, which breaketh allwayes, and at low water is uncovered, about which you may ſayl on both ſides. *From* this ſuncken rock to Swegge ſound, the courſe is eaſt, and eaſt and by north a league, but the Voghel or black Oxe & Sweggeſound are diſtant about three leagues.

Swegge ſound. Sweggeſound is a little Haven behind three great rocks, with a little Iſland of an Engliſh mile long on the eaſt ſide of it, when you fayle alongſt by it, being but a little off from the ſhoare, you cannot diſcerne this Iſland from the maine land, but it ſeemeth to be all whole land, he that is not there verie well acquainted, cannot perceive that to be an Iſland, before that he come cloſe to it, for to runne in behind it. You may ſayle into Sweggeſound either to the eaſtwárds of that Iſland, or to the weſtwards of it, according as the winde will ſerve. To the weſtwards of Sweggeſound or the three foreſayd rocks, at the weſt end of the end of the foreſayde Iſland lye a great multitude of rocks & foul grounds.

For to ſayle into the weſtern channell, you muſt leave them all on the ſtarboard ſide, and runne in betwixt them and the three foreſayd rockes, when you come to the end of theſe three Rocks, you muſt luffe up to the ſouthwards about by them towards the northeaſt or north, & anchor there in ſeven or eight fathom, there you ſhall lye landlockt for all winds, but with a ſtorm out of the weſt the growne ſea can come in rowling there through. You may alſo ſayle in further behind the rocks, untill you come in behinde the foreſayd Iſland, in a little narrow Bay, there men doe lye in 2 fathom and a halfe, or three fathom, and alſo ſheltred for all winden. In this Haven of Sweggeſound the ſhips commonly doe lye there to tarrie for the winde. He that is bound to the weſtwards, may runne out to the ſouthwards of the three foreſayd rocks, & he that is bound to the eaſtwardes, may ſayle out to the northwardes, through betwixt the Land and the Iſland, but that channell is verie narrow & not above 2 fathom deep.

A halfe league to the eaſtwards of Sweggeſound lyeth the haven of Bremſnes, a little quarter of a league within it on the ſtarboard ſide ſtandeth a little church, with ſome houſes, which you ſhall eſpie behinde a point, when as you are come ſomewhat within, there dwelleth the Governour of Normer Leen. Men were wont to come to anchor there to paye cuſtome, but now the Kings Cuſtomer dwelleth over againſt it in little Foſſen, ſo that now at this preſent, men may either goe there, or to little Foſſen for to paye their cuſtome, according as occaſion doth ſerve. Bremſnes.

For to anchor before Bremſnes, you muſt looke out for two beakons, which ſtand by the church upon the water ſide, thwart of the innermoſt is the beſt Roade, & alſo the beſt grounde, let your anchor fall there, in twenty, fifteen, eight or tenne fathom, that is neare by the ſhoare, for there it is verie ſteep riſing ground, and make you faſt with a hawſer to the beakons, there you ſhall lie landlockt for all winds, you may not anchor any where thereabouts, then in the foreſayd place, by reaſon of the great depth, & verie ſteepe grounds.

Little Foſſen or Foſſound is a narrowe haven, lying to the northwardes, over againſt Bremſnes, betwixt two lands. In theſe two places lye the ſhips commonly to tarrie for the winde, they that are bound to the eaſtwards before Bremſnes, & they that are bound to the weſtwardes in Little Foſſen. Men may alſo ſayle from Foſſen to the eaſtwardes, through betwixt the foreſayde land, & come into Stanwixfioerd againe in roome into the Liet of Dronten, but it is a verie narrow channell, and not wel to done for them which are not there verie wel acquainted. Little Foſſound.

Weſtnorthweſt, from the haven of Bremſnes goeth a channell through the Rockes called Fleſſound, after three round Rocks, called three Fleſſe vvhich lye in a rovve vvithout the eaſt ſide of this channell, and there by is very eaſy to be knovvne. A little vvithin the three Fleſſes, lyeth a great black flat rock, vvhen you are by or in the Havens-mouth of Bremſnes, it lyeth vveſt-northvveſt, or ſomevvhat more northerly from you. For to run out from thence at that channell, ſayl right vvith the aforeſayd black rocks, and runne to the ſouthvvards of it cloſe alongſt by it, leaving it and the Fleſſes on the ſtarboard ſide, (to the northwards of this flat rock & the Fleſſe it is all full of rocks, ſome above and ſome under vvater) you ſhall then leave on the larboard ſide of you tvvo other rounds rocks, vvhich you ſhall ſee lye about a ſhot of a caſt peece eaſtnortheaſt, or northeaſt & by eaſt one from the other. When you are come without the Fleſſes, you ſhall be without all the rocks, but ſomewhat to the weſtwards of them lyeth a great row rocks, lying weſtnorthweſt a good wayes into Sea, you may runne weſtnorthweſt alongſt by them unto the end: when you are come without the Fleſſes you may ſet your cours ſomewhat more northerly, for to get ſea room betimes. In this foreſayd channell there is no danger, that can hurt you, but you may ſee it. In the offing you may know this foreſayd channell, by the foreſayd three Fleſſes. Fleſſound. Three Fleſſes.

The markes for to finde Fleſſound, comming in out of the

Freekol. the ſea, are two high Hils, the one called Freekol, lying upon an Iſland, towardes the ſoutheaſt, not farre from Bremſnes, the other called Northhorne, lying farr within the land. Freekol is a hill with two hommocks where of the ſouthermoſt is the ſmalleſt & loweſt. North-horne is a hill much higher, with a ſharp toppe, & lye alwayes white, covered with ſnowe. When this hill and the foreſayd ſouthermoſt Hommock of Freekol ſtand one in the other (then they are ſoutheaſt and by ſouth from you) and if that you ſayle in right with them, you ſhall without fail fall right open before Fleſſound. It is a channel of a ſhoare inlet, and very commodions, is alſo Gryp-ſound for them which comming from Dronten, Edou, or any other place in the Lieth, and before night cannot faile to the channells of the black Oxe or Voghel, for to runne through them into ſea.

Northhorne.

About a quarter of a league to the eaſtwardes of Bremſnes lyeth Stangwyxfioird, a large broad ſound, at the eaſt poynt lyeth a great many rocks, within lyeth a Haven, called Hamerſound, you may not come in there but with a Pilot, except you be there extraordinary well acquainted.

Hammerſound.

A quarter of a league within that foreſayd point, on the north ſide of Stangwyxfioird, lye two lade-places, Jorianwach and Lynwach, men runne in there to the northwardes, behinde ſome rocks, but it is alſo Pilots water.

Jorianwach. Lynwach.

Towards the ſoutheaſt from Jorianwach, men may ſayle farre within the land, into divers ſounds, Stangwyxfioird, Schaelwicxfioird, Northfioird, Walsfioird, Wenningfioird, and other more. Upon the land of Jorianwach lyeth the mountaine of Toeſter, in 2 hilles, to the eaſtwardes of it upon the next land lyeth the mountaine of Stadebuye, alſo in 2 hills, as Toeſter. Theſe hills of Toeſter and Stadebuy, when you come from the weſtwardes alongſt the Lieth, lye right behinde one the other, and ſeeme then to be no more then one hill, but being thwart of them in the Liet, or at ſea, each ſheweth in two, which is together foure very high hills, and are commonly called together without difference Toeſter Poeſter.

Toeſter Poeſter

Betwixt Toeſter and Stadebuye runneth through a narrow Sound, into the Northfioird, called Soolſound. To the eaſt of Stadebuye runneth alſo another ſound through into the Northfioird, called Emmerſound, within which on the north ſide, cloſe by the Northfioird is a lade place, where men lade good deales.

Soolſound.

A quarter of a league in the Lieth, to the eaſtwards of Emmerſound, runneth in another ſound, at the entrie broade and wide within it divideth it ſelve into 2 parts. Sayling in there you muſt leave *Fi*ſholme and the Yellowe Iſland on the larboard ſide, & a rockie Iſland, called the flat Iſland, with manie Rocks on the ſtarboard ſide. The Yellow Iſland is not wel to be diſcerned from the main land, for thoſe which are not there well acquainted, the end of the Nortfioird runneth there about behinde it, & maketh it an Iſland. The Norway barkes runne much thereabout behind it. To the ſouthwardes of the flatte Iſland lyeth a Rock or little Iſland, called Flatholme, betwixt them both is good anchoring in 10 or 12 fathom, landlockt for all winds.

Emmerſound. The Yellow Iſland. Flatholm.

Through this Sounde men doe runne into Eurſound, a lade place lying in the Northfioird, there ſtandeth a little church on the weſt ſide of the flatte Iſland. Betwixt the little Iſland is alſo a good haven, where men may lye in three, foure and five fathom, it is not broade but cleane. To the eaſtwards of this Yellow Iſland lyeth the high land of Dromſnes. *F*rom thence eaſtwardes, further up unto the Liet, towardes Dronten or Agenes, it is moſt all whole land, and not ſo broken, as to the weſtwards of it.

Eurſound. Dromſnes.

Thwart of the rocks of Hammerſound (lying on the eaſt ſide of Stangwyxfioird) lyeth a faire channell called Gryp-ſound, one of the beſt channells for to come in out of the ſea into the Liet, it is about a quarter of a league broade, and goeth in cloſe to the eaſtwardes of the Iſland Grype.

Grype is a little rounde Iſland lying from the Voghell northeaſt and by eaſt diſtant about five leagues, upon it it dwell manie *Fi*ſhermen, which goe from thence to ſea, to fiſh upon divers bancks, of fourtie, fiſtie, ſeventie, eightie, and hundred fathom, foure, five, ſixe, ſeven, eight and ſome tenne leagues without the land, which they knowe to finde by markes on the ſhoare. On the north ſide of Grype there lye but two or three rocks cloſe to the ſhoare, ſome ſaye that thereabout is anchor ground in twelve fathom. On the ſouth or weſt ſide, it is full of Rocks, but they lye moſt above water. About halfe wayes betwixt Grype and the three Fleſſes, ſomewhat without all the other Rocks, lyeth a funcken rock a little under water, he that runneth alongſt without theſe rocks, muſt be mindfull thereof.

Gryp.

For to goe into Grypeſound comming in out of the Sea, you muſt bring the high Mountain of Toeſter Poeſter eaſtſoutheaſt from you, and ſayle in right with it, and ſo you ſhall not fayle to runne in ſight of the Iſland Gryp, which is eaſy to knowe from the other rocks, by the great manie Fiſhermens houſes, which ſtand upon it, and upon no other Iſland nor Rocks thereabouts, leave that Iſland on the ſtarboard ſide, and goe in firſt eaſtſoutheaſt right with Toeſter, being paſt the Iſland Gryp, bring Toeſter two poynts on your larboard bowe, and goe ſo in ſoutheaſt, you ſhall come into the Liet betwixt Hammerſound and Toeſter. From thence to the little Iſland Edou and about four leagues. About three leagues to the weſtwardes of it, or a league to the eaſtwards of Grypſound in the Lieth, lyeth alſo a funcken rock, almoſt even with the water, and almoſt amidſt the farewaye, neareſt the north ſide, you may alwayes ſee the ſea breake upon it, leave it on the larboard ſide, and runne to the ſouthwards of it, there it is broadeſt, you may for a neede run alſo to the northwards of it through betwixt it & the other rocks, but it is there narrow.

Gryp-ſound. Edou.

Edou or Edoe is a ſomewhat low plain Iſland, a league long, & very narrow, which is the firſt land out on the larboard ſide, upon the Liet, that men have ſhelter of from the ſea, to the weſtwards of it, there is nothing but broken land; Rocks and little Iſlands, where the growne ſea commeth rowling in through. Not farre from the weſt end, upon the ſouth ſide of Edou, ſtandeth a little white Church, thwart of it, or a little to the eaſtwards of it, men may anchor in eight, nine, and tenne fathom. The ſhoare is ſteep riſing ground: If men doe come neare it in foure fathom, they ſhall be preſently faſt, but the grounds is ſoft. When as men come from the weſtwards, and will anchor there, they muſt (comming neare the weſt end of the Iſland) countinually feele with the leade for the anchor ground, and ſo ſoone as they feele it, let fall their anchor, thwart of the aforeſayd little white Church, or a little to the eaſtwardes of it, ſo that the little Church come to ſtand over the houſes. When as they lett fall their anchor in 10 fathom, and wending up towards the land, verie out the cable, then the ſhippe ſhall come to lye there in ſixe fathome, the Liet is thereabouts aboute a halfe league broade.

Edou.

Upon the eaſt end of Edou is alſo a little haven called Kurow, and it is ſo little that there can lye no more then two or three ſhips, there lyeth a little black rock not farre from the ſhoare, men doe runne in betwixt that little rock and the Iſland, & anchor betwixt them both, there men lye landlockt for all winds, but the ground there is not cleane.

Kurou.

At the eaſt end of Edou lyeth another Iſland ſomewhat long, called Glaſeu. To the eaſtwards of it runneth a great broade Sound into ſea, called Ramſfioird, but it is know of few. With northerly winds there commeth through a great growne ſea into the Lieth.

Glaſeu. Ramſfioird.

To the eaſtwards from Ramſfioird lieth the land of Hitteren, two greate long Iſlands. Norther Hitteren, & Souther Hitteren, together about ſeven leagues long, ſo that he that ſayleth up the Lieth thwart of them, can not perceive otherwiſe, but that he ſayleth in betwixt

Highland of Hitteren.

two maine lands. At the ſouth end or weſt end of Hitteren, which is on the eaſt ſide of Ramſhoerd ly two little Weroy Iſlands, called Weroy, there you may ſayle in betwixt them, & anchor in good white ſand ground, you may alſo ſaile through betwixt the little Iſlands, alongſt into the Liet, & then you leave a ſuncken rock lying on the ſtarboard ſide by the ſouthermoſt little Iſland.

From the Iſland Edou to the Highland, or the pointe Dromſnes. of Dromſnes it is northeaſt and by eaſt and eaſtnortheaſt diſtant about three leagues. To the weſtwards of that poynt, to witt, betwixt that poynt and the land to the weſtwardes of it called Schipnes, lyeth a haven called Schaerſwyke. In the mouth of this haven, about the middeſt of the channell, but ſomewhat nearer Schipnes then Dromſnes, lyeth a ſuncken rock, which falleth drie at low water, you may runne in about it on both ſides. A little within the poynt, on the ſouth ſide ſtandeth a Countriemans houſe, before which you may anchor in five, ſixe or ſeven fathom, cleane riſing ground, which you may come neare by your leade. This haven lyeth about a league more to the eaſtwards, then Ramſhoird, on the ſouth ſide of the Liet, fitt for to come to anchor in, for thoſe which can ſayl no further by day. To the weſtwards of this foreſaid haven Schaerſwycke alongſt the land of Schipnes, lye manie Rocks by the ſhoare, ſome above and ſome under water, therefore you muſt ſomewhat ſhunne the ſouth ſhoare thereabouts, but the north ſhoare alongſt by Hitteren is verie cleane. The Liet is thereabouts a great halfe league broade.

About five leagues to the eaſtwards of Schaerſwyke, on the north ſide of the Lieth, lye the two Iſlands of Lexen. Lexen, to witt, norther and ſouther Lexen, which are together about a halfe league long. There the Lieth lyeth betwixt both eaſtnortheaſt, and northeaſt and by eaſt.

In ſouther Lexen is a baye, before which lyeth a round roch, making it there within a faire haven, called the haven of Lexen, the beſt haven of al the Liet. John Geurtſon Boogaart, of Amſterdam, hath (at this owne charges, for the commoditie of ſhips that come there) cauſed to be made a great Iron ring: men doe anchor either to the eaſtwardes or to the weſtwardes of the foreſaid rock, where they will in ſixe, ſeven or eight fathom, and bring a hawſer on the foreſayd Ring, the further men doe runne into the Bight, betwixt the Rocke and the land, the ſhoaler it is but all clean and clear ground.

Road un der north Lexen. At the norther end of norther Lexen is alſo a place, where is good anchor ground fitt for to make road in.

Mol-tow. Over againſt the haven of Lexen lyeth an other haven called Moltow, where the ſhips doe oftentimes anchor in the Harveſt or beginning of the winter, for to ſet ſayle with an eaſt winde, becauſe they can hardly get to ſayle from Lexen with eaſterly winds.

A league to the ſouthwards or to the weſtwards of theſe havens of Lexen and Moltow, on the ſouth ſhoare, lyeth a little Iſland, whereupon ſtandeth a Warder, called Swan-holm. Swanholm which men may ſayle round about, under that little Iſland it is good anchoring (as wel for them which are bound to the eaſtwards as to the weſtwards) in 4 or 5 fathom good clean ſand ground.

The ſouth ſide of the Liet off from Schaerſwyke alongſt to Hegwyke, (which is a league and a half, and two leagues by weſt the poynt of Agenes) is moſt cleane with little fowle grounds: but from Hegwyke alongſt to Agenes the coaſt is fowle and rocky. The north ſide alongſt by Hitteren, is alſo indifferent cleane, except at the north end lye ſome rocks called the Terlingen, which lye ſomewhat of to the ſouthwards from the ſhoare into the Liet.

Hem-ne-ſioird. A little to the eaſtwards of Hemneſioird, over againſt Hemneſchell (an Orchard upon a high land) there the Liet is at the narroweſt, & no more then a halfe quarter of a league broad.

Hemneſſioird lyeth over againſt the north end of Hitteren, it is a bay where many Sawes doe ſtand, & abundance of good Deales are cut & laden.

To the northwards or eaſtwardes of the Terlingen, at the north end of Hitteren, in betwixt Hitteren and Lexen, lyeth a haven called Deepſound, the Norway Barks (comming from the ſouthwards) run in there along behind Lexen to the northwards. Deep-ſound.

From Lexen to the poynt of Agenes on the ſouth ſide, or to Euriland on the north ſide, the Lieth lyeth alongſt eaſtnortheaſt and northeaſt & by eaſt 3 leagues. Agenes is the northermoſt point of the Lieth, you muſt go about by it when you are bound to Dronten. Age-nes.

Betwixt Norther Lexen & Euriland lye two Iſlands, the ſouthermoſt is called Foſſen, the northermoſt Garten, to the ſouthward of *Foſſen* you may ſail through alongſt into the ſea, but not without a Pilot. Foſſen. Garten.

For to ſayle from Lexen to Agenes, run alongſt by the n. ſhoare, which is the cleaneſt, the ſouth ſhoare is fowle. A cables length or a cables lenght & a halfe to the w. wards of the poynt Agenes, lyeth a ſuncken rock not farre from the ſhoare. For to avoid it & more other danger, keepe alongſt by the north ſhoare (but take heed that you run not in to no bights or bayes) ſo long untill that you can ſee the houſes upon Agenes, then ſayl towards it, & then you ſhall not ſayle within any dangers on the ſ. ſhoare. On the poynt of Agenes is alſo a great Iron Ring for to moore the ſhipps to there, by it is deeper and ſteepe of-going fowle ground. For to anchor there you muſt bee very cloſe by the ſhoare before you ſhall finde ground, & then you muſt make a cable faſt on the foreſayd Ring, cloſe to the ſhoare it is about five of ſixe fathom deep fowle ground.

On the north ſide of the Liet over againſt the poynt of Agenes, lyeth Euriland, a flat fayre greene land, upon it ſtandeth a little white Church about an Engliſh mile of from the ſhoare within the land, almoſt like the little Church of Edou, thwart of it is good road cleane flat riſing ſand, & clay ground, men doe commonly anchor there thwart of the firſt beakon in ſeven, eight or nine fathom good clay ground, 16, 17 or 18 fathom men lye farre from the ſhoare. Eur-land.

With contrary windes, or that men can not come about Agenes, or taken with the night, they doe anchor moſt commonly there.

By *A*genes there runneth out alwayes a great ſtrong current to the weſtwardes, and by reaſon the lands from thence to the ſouthwardes on both ſides are very high, & the wind (being ſoutherly) falleth there betwixt then both, alwayes ſtrong to the northwards, men can not (in ſayling up) get any thing there with turning to windewards, but in ſailing of they may get much by the current with turning to windewards.

A little about the point of *A*genes on the ſtarboard ſide, is a great Bay called Salva, wherein is good anchor ground, & good lying, but with northerly winds it is very hard to come out there for thoſe that are bound out, or to the weſtwards. Salva.

*From A*genes to the point of Roobergh, the Liet lyeth ſouthſoutheaſt about three leagues. *A*bout halfe wayes or ſomewhat more on the weſt ſide lyes another bay, called Lenſwycke, where men may have roade.

Roobergh is a ſomewhat flat poynt, to the eaſtwards or to the northwards about this poynt is good road in ſixe or ſeven fathom. *A* good wayes from the ſhoare to the weſtwards of the poynt, the Norway Barks doe oftentimes anchor, but the ground there is not cleane, and therefore it is no good road for great ſhips. Roo-bergh Roade.

Over againſt Roobergh lye divers Bayes and havens, as Urkedal, Burſen, Bodwyke and other more, where many Deales are cut and laden.

From Roobergh to the little Iſland or Holm of Dronten, the courſe is eaſt 3 leagues, when you are a little paſt Rooberghen, you ſhall ſoone eſpy it againſt the high land to the eaſtwards of Dronten, betwixt them both it is wide and broad. From the poynt of Roobergh the land lyeth up to the northwards ſo far that at ſome places men can hardly ſee over the water. When you come by the Holm, you may ſaile about within it on both ſides, you muſt bring the Holm to the northwards Burſen. Bod-wyke. Holm of Dron-ten.

of

Teemse flu.
Cliſt
Teerack
Blacktyl
Borcham
Quine borch
Schapeie
Le Noor bay
Colcheſter
Brickelzey
S. Oſyes
De Naes
Tilborch
Schapey
Cliſt
Teemse Flu.
Tylhaven
Blacktyl
De Sandes
De Spanjaert
Vyſchers hoft
Wieringers Tuken
De Spitze
Commx hop
Weſtrock
De Kaert
Baſels cliſ
De Baſel
Peter
t'Voorlandt
Kinters knock
Goeyingh
Galper

Gravesent
Groenher
Oorits Rick.
Groemoyts
Diefort
Welles
Elemens Rich
Wolvits
Wolvits dogh
C. Drakes schip
Grey
Porfliet
Gravesent
Londen
Barking
Blackwal
Rootklyt
Rivier van Londen
Blakeney
Pascaarte van ENGELANT Van t'Voorlandt tot aen Blakeney waer in te sien is de mont vande Teemse.
Crommer
Haesborgh
Amiraels huys
Duynswis
Walderwyck
Sowyk
Eys
Kaffe
Leyfluys
De Hoens
Winterduyn
Armuyen
Aelburger knock
Sowels Bay
Holmen voor Armuyen
Winterduyner Sandt
't Nieuwe Sandt
Duytsche mylen 15 in een graat
Spaensche mylen 17½ in een graat
Eng. en Fr. mylen 20 in een graat

of you, & anchor to the ſouthwards of it in ſix, ſeven or eight fathom, according as you lye cloſe to it or farre from it, there is cleane clay ground. The Holm & the Elf, or river of Dronten lye north and ſouth about a ſhot of a caſt peece aſunder, betwixt them both it is every where good anchor ground, and depth of 20 and 21 fathom.

About a bow-ſhot northeaſt from the Holm lye two ſuncken rockes, which at low water are uncovered. When as they are even covered with the flood, then you may ſayle in over the ſhoaleſt of the Barre into the Elf with a ſhip that draweth 11 foot.

To ſayle into the Elf of Dronten, it is Pylots water, there ſtand commonly two or three maſts for beakons, but there is no certainty of them that men may truſt unto, for they are oftentimes ſhifted: ſometimes they ſtand on the e. ſide, ſometimes on the weſt ſide, & alſo ſometimes on both ſides. When you come a ſhips length or two within the beakons you ſhal come to a chindely poynt on the ſtarboard ſide, by which you muſt luff up to the Kay: upon the Barre it falleth with a ſpring tyde allmoſt dry, but within it is deeper.

Of the ſtreames on theſe coaſts.

From Stade to Dronten a ſouth and by eaſt and north and by weſt moon maketh high water, with a ſpring it falleth a fathom and a halfe up and downe, with an ordinary tyde ſcarce a fathom.

The tydes run not there alongſt the land, but the flood falleth thwart on againſt the land, and the ebbe to the contrary thwart from the ſhoare to ſeawards.

Courſes and Diſtances.

From Stemneſheſt to Gryp northeaſt and by eaſt 6 leag.
From Gryp to the Iſlands of Momendall northeaſt 18 leagues.
From Gryp to Holyland northnortheaſt and northeaſt and by north 27 leagues.
From Gryp to Ruſt north and north & by eaſt 64 leag.
From Gryp to the north end of Hitland ſouthweſt and by weſt 115 leagues.
From Gryp to the ſouth end of *Fero* weſtſouthweſt, 167 leagues.
From Gryp to the eaſt poynt of Iſland weſt, and weſt and by north 233 leagues.

Of the heights of theſe lands.

The Iſlands Whitholme and Smeerholme lye in 63 degrees 54 minutes.
The Iſland Gryp in 64 degrees.
The town Dronten 64 degrees.

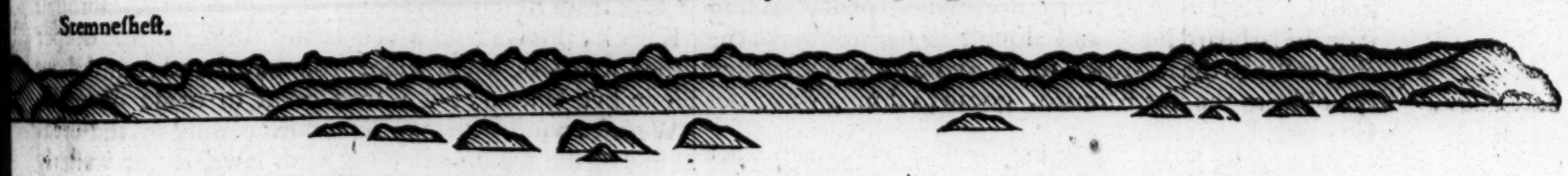
How theſe Lands doe ſhew themſelves at Sea.



Thus ſheweth the point of Stemneſheſt or Heynſt.



Thus ſheweth the Iſlands of Roemſdale, when the middlemoſt of the three higheſt and the weſtermoſt is ſoutheaſt from you about 3 leagues.



The Iſlands of Roemſdale.

Thus ſheweth the Land between Stemneſheſt and the Broad-ſound, when as you ſayle a ſeaboard alongſt by the Roemſdaels Iſlands & Schares.



Theſe two figures belong at the croſſes one to the other.



The land from Gryp weſtwards or ſouthwards towards Stemneſheſt like theſe two figures here above, when as you ſaile alongſt by it ſeven leagues without the land.

The tenth Demonſtration,

In which

The eaſt ſide of England, is shewed, from the River of London to Welles.

BY two wayes men may ſayle into the river of London, from the ſouthwards alongſt by the north Forland, and from the northwards alongſt by the Naes. If you will ſayle in there from the ſouthwards, then you muſt firſt ſhun the North Forland, it is there ſhoale a good wayes from the ſhoare, bring the north Forland alſo not more ſoutherly from you then ſouthweſt, that you do not run on againſt the north-grounds,

grounds, which lye farre to seawards. Comming by the land, run alongst by it, but come not too neere it, that you loose sight of the spyre of the steeple of Margat behind the land, for then you should come too neere it; but if you keepe so far from the shoare, that you can see the foresayd steeple above the high land, or keep it even in your sight, then you cannot take hurt of the south grounds. Comming thwart of Margat, then you are past the foresayd shoals or south grounds. Run then boldly towards the shoare, and within two cables lengths alongst by it, for to avoid the north grounds, which lye farre to the southwards towards the land. Sayle on so west all alongst by the shoare, untill that the Reculvers (which are two steeples upon one Church) come one in the other, and then you shall run in sight of the first buye upon the Lasts, which lyeth upon the foresayd markes of the Reculvers, being by it you can also see the other buy which lyeth like as the first also on the north side, and over against it on the south side standeth a beakon, there you must sayle through betwixt them both, leaving the buye on the starboard side, and the beakon over against it on the larboard side. From thence you may with little shippes, or shippes of little draught, but not with shipps of great draught, at high water run over the Swallow on westnorthwest towards Sheppy, for it is there shoale water, with ships of great draught you must runne through the Fishers deep towards Black-tayle. You may also runne from Margat with small Shippes alongst by the shoare upon the lead at high water even unto the Sheppy, but in sayling alongst there, you must cast your tides well, for the flood falleth very strong into the Swallow, and the ebbe to the contrary very strong out.

Reculvers.

When you come by Sheppy, runne within two cables lenghts alongst by it, for to avoyd the taile of the Spanjard, untill that you be past Quinsbrough, edge then of from the south shoare for to avoyd the Noere, which is a sande that shooteth of from the south poynt of the River a good wayes to the eastwards, upon the outermost end where of standeth allwayes a beakon, whereby you may know it. Run alongst to the northwards of it, leaving it on the larboard side, and alongst in the middle of the channell into the sea-reach for to avoid the grouds which lye of from the north shoare, goe in so alongst towardes Gravesend.

Sheppy. The Spanjard. The Noere.

To sayle with shippes of great draughts alongst by the north Forland up into the Tames, you must (when you are past the buyes upon the Last) sayle through the Fishers deep, toward Black-tayle, which lyeth from the second buye upon the Lasts, unto the first buye in the Fishers deep, northwest and northwest and by west, which lyeth upon the north side of the sand, which men doe call the Spanjard, those two buyes lye a great wayes one from the other.

Fishers-deep.

Sayling from the buye upon the Lasts it is a great wayes all shoale water, so that you must runne over there with high water, but comming neare the buye upon the Spanjard, it is by little and little deeper water. He that will sayle over here, must reckon his tydes well, the flood falleth there alongst towards the southwest allmost thwart over the deepe and the ebbe to the contrary.

The second buye in the Fishers Deepe you must leave on the starboard side, & the buye upon the Spanjaerd on the larboard side: being past that you come against the Blacke-tayle, to the southwards of the Shoe-beakon into the right deepe. The east poynt of Sheppy shall then lye about south from you. From the Shoe-beakon the course is southwest to the point of Blacke-taile there runneth of a hooke which men might (at unawares) sayl within (comming from the northwards) in five or sixe fathom, but if you keep from the shoar in seven fathom, you cannot sayle within it. From Black-taile to the beakon upon the Noere, the course is westsouthwest, leave it on the larboard side, as before is sayd, and runne in alongst the river, in the middst of the channell betwixt both lands unto Gravesend.

For to saile into the river of London comming from the northwards you must come neere the coast to the northwards of Orfordnes, which is to the northwards of all the sands, there lye Albrough, Dunwich, Walderswike, Sowle and Covehit, all betwixt Orfordnes and Leystaff. Covehit is a sharp steeple like as also Leystraffe, but Sowle and Walderswyke, albrough and Orfordnes are flat steeples, Sowle and Dunwich lye both upon the high land, betwixt them both is a valley, therein you may see Walderswike when you are thwart of it, Dunwich which is the best to be knowne off all these foresayd places: it hath two flat steeples, and on both side some trees. To the southwards of it lyeth Albrough wich is also very easy to beknowne, it hath one high flat steeple with three mils, the two stand to the northwards, and the third to the southwards of Albrough when you are thwart of it, but sailing to the southwards, they come at last all three to the southwards of it. The land without Albrough, and to the southwards of it is very low flat and chindely land.

For sail into the river of London from the north-ward. Albrough. Dunwich.

Betwixt Albrough and Dunwich about half wayes betwixt them, lyeth a Wood which is at both ends high, and in the middest low with a saddle; this you shall commonly see first when you fall with the land thereabouts, and is the best to be knowne for to know the coast by; the land without it, and to the southwards is very low flat chindely land. About two leagues to the southwards of Albrough lyeth Orfordnes, betwixt them both stand also two woods of trees, which shew themselves a farre of like Castles or towers. Orfordnes is a flat steeple with a thick or broad castle, which hath also a thick flat steeple, almost off fashion like the steeple off Rarop, open above with holes in it like Bellholes.

Orfordnes.

Before Dunwich you may anchor, there is good lying in eight or nine fathom, somewhat soft ground. Before Albrough is the best road of all the coast thereabouts in six and seven fathom.

East from Aelbrough about two leagues lieth Aelbrough Knock, this is a sand which at low water is not deeper then seven or eight foote: you may sound round about it in five fathom, but is not good to come nearer it. With sea winds you may descerne it plainly by the breaking of the sea upon it; but with lawderly or westerly winds, & faire weather, the sea breaketh not upon it, hee that runneth thereby to northwards with an ebb shall see it commonly ripple very much upon it, like as upon most of the English bancks, & not indeed upon the bankes, but against them, for upon the shoalest or middest of the bankes is alwayes the smoothest water, like as you finde every where.

Aelbrough Knock.

When as Aelbrough is west from you, and the two steeples of Orfordnes are one inthe other, there you shal finde Albrough Knock. These are sure marck of that sand.

Or Whiting, or Whiting sand, is somewhat a long small sand lying before Orfordnes, and the chindely land to the southwards of Aelbrough, and lyeth alongst the reach, but the south end lyeth further from land then the north end, there is at low water not above six or seven foot water upon it. Comming from the northwards, men sayle commonly to the westwards of it, that is through betwixt the land and Whiting-sand, towards the Naze. Men may also saile alongst to the eastwards of it, through betwixt Whiting-sand and the eastermost poynt of the Court, or Court-sand, which some doe call the Rib.

Whiting sand.

The north end of the Whiting lyeth alongst close to the shoare, and lyeth from the steeples of Orfordnes southeast and by south, it is so exceeding steepe and needle too, that you shall have the one cast nine, the next cast five fathom, and then you are no more but a ships length from it, before you can have the lead again

you

you ſhould be upon it. When as you ſit with the foreſhip againſt it, it is at the ſtearne five or ſix fathom deep.

Alongſt the inner-ſide, it is alſo everie where ſo ſteepe, that you cannot ſounde it, but on the outer ſide you may runne alongſt by it in five fathom upon the lead, untill you come within the ſands.

When as you come from the northwardes and wil ſayle through within the Whiting, you muſt run cloſe alongſt by the ſhoare, & ſouthweſt about by the poynt of the chindle to the ſouthwardes of Aelbrough, untill you come within the north poynt of the Whitinge; when the ſteeples of Orfordnes come to be northweſt and by north from you, then you are right thwart of the north poynt of the Whiting, being within it goe againe more ſoutherly, to wit, ſouthweſt and by ſouth towardes Balſy cliffe.

If you ſhould fall to the ſouthwards of Whiting, or els comming from the ſouthwards will ſayle in there to the northwardes, then bring the ſteeples of Orfordnes weſt-northweſt or northweſt and by weſt, but for all not more northerly then northweſt from you, and ſayle ſo right in untill you come by the Chindle ſtrand, then run in alongſt by it, as is before ſaide, and then you ſhall run far enough alongſt to the northwardes of the Whiting.

If you will ſail into the eaſtwardes or the ſouthwardes of the Whiting, then bring the ſteeples of Orfordnes northnorthweſt, or northweſt and by north or northweſt from you, and ſayle in ſo right with them; untill that the wood of trees, that ſtandeth upon the next poynt to the ſouthwardes of Balſy cliffe, come to Balſy cliffe, which ſhall then ſtand about weſtſouthweſt from you, keepe that aforeſayd woode to the ſouth ſide of the cliffe, and ſaile in bouldly right with it, and then you ſhall runne right in the fareweye, in betwixt the Whiting, and the tayle of Courteſand, but if you bring the foreſaide trees more then a handſpikes lenght without the cliffe, you ſhall not fayle to runne on againſt the point of the Courte. That aforeſayd wood of trees is verie eaſy to be knowne, becauſe there abouts ſtand no other trees.

Or bring the ſteeple of Balſy weſtſouthweſt from you, and ſaile in ſo right with it, untill you come by Whiting-ſand, in five or ſixe fathom, and leade it in ſo by it upon the leade, untill that you come by Balſy, or that you get deeper water.

When you come neare Balſy, whether you be come in from the northwards, or the ſouthwardes of Whiting-ſand, you muſt keepe ſomewhat of from the ſhoare, becauſe of a little riffe or ſmall tayle, that ſhooteth of from the ſhoare, thwart of Balſy cliff, which you muſt avoyde ſomewhat, with ſhippes of greate draughts, there remaineth at low water upon it not more then two fathom, you may commonly perceive it well by the rippeling of the tyde.

You may alſo ſayle in to the ſouthwardes, of the Ribbe (that is, the tayle of the Courte or Courte-ſand) thus: Bring the ſteeple of Balſy northnorthw. or a little more northerly from you, and ſayle in ſo right with it, and ſo you ſhall runne into the northwardes, or through the Courte, at a channell of eight fathom depth, the e. ſide of this channell is ſteepe, come no nearer it then eight fathom, but by the w. ſide you may runne in about by the Court, upon the lead, untill you come within the ſands.

Balſy hath a high flatt ſteeple, & lyeth ſomewhat within the land behind the cliff, when as you come from the northwards, you may ſee Balſy to the northwards or the weſtwardes of the cliffe, but you ſayle it altogether behinde the cliffe, ſo that at laſt it commeth out againe to the ſouthwardes of it.

If you will ſaile to Harwich being paſt Balſy, then bring Balſy to that ſteep poynt to the ſouthwardes of Balſy where the trees ſtande upon, keep theſe markes ſo ſtanding, and runne ſo alongſt by the ſhoare, untill that you be over the poynt of the Chindle, the markes thereof are two high trees within the land, when they are about northnorthweſt from you, then they come one in the other with the ſteeple of Harwich, and then you are right over the poynt of the Chindle, and then you ſhall gett deeper water, to witt, foure and five fathom or ſomewhat more againſt the higheſt water. Runne in then about by the point, the channell lieth in right north, but in the midſt of the havens mouth lies a ſuncken rockie & ſtonie ground, which you muſt avoide, you may ſaile in about it on both ſides, by the one ſhoare or the other, but alongſt by the eaſt ſhoare it is beſt, being within it, you cannot ſayle amiſſe, or take hurt, if you do not ſaile bluntly againſt the ſhoare: there you may anchor al over, where you pleaſe before the towne, in five, ſixe and ſeven fathom. You may well alſo goe further into the bight, there it is clean everie where. The fareweye betwixt Orfordnes or Whitingſand and the Naes lyeth moſt ſouthweſt and by ſouth, & is ſix, ſeven & eight fathom deepe, in turning to windewards, you may run to the ſhoare in 5 and 4 fathom, but cloſe to the ſands it is deeper, to witt, eight, nine, and ten fathom, the nearer the ſands the deeper water.

The Naze.

But for to ſayle from Balſy to the Naze, you muſt marke the ſteeple of Balſy, when it commeth within a capſtane barres length neere to the ſouth end of the cliffe, then keep them ſo ſtanding, ſo long untill that the houſe upon the Naye come over the two fields, which lye on againſt the Highland, or come over a blackhead upon the ſea ſide, ſaile then right in with them, untill that the ſteeple of Harwich come to be northnorthweſt from you in the little valley of a redd cliffe, leave then the firſt markes, keepe the ſteeple of Harwich in that little valleye, and goe on ſouthſoutheaſt, untill that the third poynt of the Naze come without the 2 other poyntes, ſo you ſhall run trough betwixt the Naze & the Court, there remaineth at lowe water no more then eight, tenne, and at ſome places twelve foot water, therefore it is not good to runne trough here, unleſſe that it be a quarter floud or with a ſhippe of great draught at halfe floude, there it is verie uneven grounde rockie and ſtonie. The poynt of the Naze is verie ſtonie, foule and uneven, the nearer the ſhoare thwart of that poynt the ſhoaler, but the nearer the Sands the deeper.

When that the third poynt of the Naze commeth without the two other poynts or the other land, and that it doth againe beginne to deepen of, to witt, 4 or five fathom, then go ſouthweſt ſomewhat ſoutherly, or ſouthweſt and by ſouth, unto the buye upon Longſand. Thwart of the Maze is Longſand verie ſteepe, ſo that it cannot be well ſounded with the lead by them that are not there verie well acquainted, but ſomewhat more to the ſouthwards, you may run alongſt by it in four fathom, and three fathom & a halfe, untill that you get the buye upon Longſand in ſight of you. The north ſhoare to the ſouthwards of the Naze is alſo flat, you may runne alongſt by it alſo upon the lead, without any danger.

Longſand.

The buye upon Longſand lyeth in 2 fathom and a half at halfflood, you muſt leave it on the larboard ſide, and the Buye upon the Spits, on the ſtarboard ſide, which lyeth a little ſhoaler, they lye about ſouth and by eaſt and north & by weſt, a muſket ſhot one from the other. The courſe betwixt the two buyes is ſouthſoutheaſt and northnorthweſt, but you muſt reckon well your tide, whether you run through there with a floude or with an ebbe. Upon the Spits, betwixt the two buyes is at halfe floud at leaſt three fathom and an halfe, or almoſt four fathom, in the right channell, a little to the ſouthwardes of the buy upon the Spits ſtand two maſts above water, of a loſt ſhipp, which are good markes. Being over the Spits, the courſe to Whitakers beakon is ſouth-ſouthweſt.

Buyes upon Longſand and the Spits.

The Spits.

Whitakers beakon

About halfe wayes betwixt then ſtand alſo 2 maſtes more on the ſame w. ſide, & over againſt theſe maſts lyeth a middle plate, whereupon lyeth a buye on the w. ſide: the fareway is alongſt to the weſtwards of this Middle plate, through betwixt that foreſayd buye and the maſtes.

Middle-plate. To the northwards of that foresayd Middle-plate, goeth out a channell by the south side of Longsand, which you may saile out and in, called the Kings-deepe. If you come from Whitakers beacon, past the Middle-plate, so far that you get sight of the buyes of Longsand or Spits, goe then boldly eastnortheast and northeast and by east into sea, or upon the lead alongst by Longsand, but if you should runne into sea, to the southwards of the Middle-plate, you should with an eastnortheast waye fall within the hooke of the Mouse. This Kings-deepe is a readie channell, and is used almost by all shippes for to runne out at.

Kings-deepe.

For to saile into the Kings deep. *For* to runne in at this channell out of the sea, then bring the poynte of the Naze northwest from you, and saile in so with it, untill that you come neare Groemsliet or Longsand in five fathom, goe in then alongst by it about westsouthwest and southwest, and by west, and keepe the sounding of Longsand; and so you shall not sayle to runne in sight of the buy upon the Spits and the foresayd masts to the southwards of it.

Schoebeakon. *From* Whitakers beacon to the Shoebeacon the cours is southsouthwest somewhat westerly, comming thwarte of the Shoebeakon, then lyeth the east poynt of Seppie about south from you. *From* the Shoebeakon the course is alongst southwest to the poynt of Blacktayle, there runneth of a Hooke, which men might sayle within comming from the northwards: but if you keepe from the shoare in 7 fathom, you cannot take hurt of it, but in five fathom you runne within it. The like Hooke is a also a little to the southwards of the Shoebeakon, which you might unawares saile within, comming from the southwardes.

Blacktaile. The Nore. *From* Blacktayle to the beacon upon the Nore, the course is westsouthwest. The Nore is a sand, lying from the south poynt of the maine land of the river, farre to the eastwardes, therefore leave the beacon on the larboard side, and goe on west alongst amidst the channell into the river, betwixt both the lands, as here before hath beene said in the description of the *Fishers* deepe.

From Aelbrough alongst by Dunwith to Covehit the coast lyeth north and by east somewhat easterly, and south and by west or somewhat westerly five leagues: but from Covehit to Leystaf north and south two leagues. Aelbourgh, Dunwhitch and the sands lying thereabouts, are descript here before.

Sowle. Betwixt Dunwhitch and Covehit lyeth the haven of Sowle which is a little shoale river, a little within it divideth it self into three parts, upon the northermost arme lieth *Sowle*, upon the middlemost Walderswycke, and upon the soutermost Dunwhitch.

Dunwitch. Covehit hath a high sharpe steeple, thwart of it lyeth a banck not far from land, which falleth almost drye at low water, but a half floud you may saile through betwixt it & the land in 3 fathom, upon the outer side it is verie steepe, so that you cannot come nearer it then nine or ten fathom. When the steeple of Easton is westnorthwest from you, then you are to the southwards of the banck, & when the steeple of Covehit is southwest & by west from you, then you are to the northwards of it.

Leystaf. Two leagues to the northwardes of Covehit lyeth Leystaf, and two leagues more to the northwardes of it lyeth Yarmouth. The steeple of Leystaff is a high sharp steeple, & standeth a greate musketh shot within the land from the houses, so that in sayling alongst you may bring the steeple on both sides of the houses. Of from Leystaff begin the banck or Holmes of Yarmouth & lye alongst to the northwards past Yarmouth, untill thwart of Winterton, there go divers channells through them, which men may sayl through, upon divers marks, for these that are there acquainted, you may sayle through within these bancks, of from Leystaff untill past Winterton.

For to come within the bancks of Yarmouth. If you wil run through from before Leystaff within these bancks, then looke out for the firebeakons which stand by Leystaff, which are two little white houses, the one standeth beneath upon the chindle on the sea side, and the Innermost upon a little hommock, somewhat farther within the land. When you come from the southwards, they shew themselves to the northwards of the towne, but come at last thwar of it. In the night there is alwayes fired upon them, for to sayl in there also by night. Bring these foresayd firebeakons northwest & by north, or somewhat more northerly from you & sayle in so right with them either by night or by daye, the church of Leystaf commeth then to the southwards of the Town over a Coutrie house by the water side, when you come against the channell, there is at low water no more then 3 fathom depth, keep these foresayd firebeakons one in the other, or bring the Innermost rather a little to the northwards of the outermost, for to avoyd a little plate, which lyeth on the south-side of the Deep, but the channell is indifferent wide, run untill you come against the strand in two fathom and a half or two fathom, so neare as you will or can, and go then up northwardes alongst by the shoare, you shall then (having sayled a little to the northwards) meet with a flat, where upon remaineth at low water lesse then two fathom depth, with laden ships, you must anchor before that flat and stay for high water, it floweth there aboute eight foot, up & downe, so soone as you are over the flat it will be 5, 6, and 7 fathom deep, edge then to the shoare, & sail toward it, and then you come before the Brewehouse, there is the roade, where you may anchor in 4, 5, or 6 fathom, from thence northward toward Yarmouth alongst the shoare is all over good anchoring and good ground.

Haven of Yarmouth. About an English mile or somewhat more to the southwards of the towne Yarmouth, is the haven of Yarmouth, it hath two wooden heads, where you must sayle in betwixt them both against the highest water, when the strongest of the floud is spent, at halfe floud it is dangerous, because of the strong tide, which should lightly carrie you into the bight, against the shoare, (against your will) it is also best to run in alongst by the southerhead, there it is deepest. At Yarmouth in the roade men doe commonly anchor to the northwards of the haven, right thwart of the towne, in 5, sixe, seven, or eight fathom, the nearer you anchor to the sandes the deeper water you shall have, but all good sand & soft grounds.

Roade before Yarmouth.

If you will sayle into the Roade of Yarmouth through the Holmes, then bring the sharpe little steeple, that standeth to the northwards of Yarmouth within the land, over te broade castle, or bring the mill to the north side of the towne: keep these marks so standing, and goe in so westnorthwest, you shall find in this channell not lesse water then eight or nine fathom at half floud, this channell is called S. Nicholas chamell: on the north side it is deepest being come in, the roade is right before the towne in five & sixe fathom.

S. Nicholas channell.

Thwarte or over against the haven of Yarmout goeth also a channell through the Holmes, for to sayle in through there comming from the southwardes then bring the Souton over the north side of the haven, the greate tree betwixt Northon & that flat little house or castle, saile in right with them, and keep these marcks so standing, untill that you be within the Holmes, within them lyeth a plate on the starboard side, a little to the northwards of haven, called the Middle ground, you may sayle about it on both sides, on the inner side in five fathom, but towards the Holmes, or about to the eastwards of it in eight and nine fathom.

Pel and Piper.

From Yarmouth to Winterton, the coast lyeth north & by west and northnorthwest two leagues.

If you will sayl from Yarmouth forth through within the bancks to the northwards, sayl a long by the land, and keep the sounding of the shoare in 5, 6, or seven fathom, untill that you have the two firebeacons, (which stand a little to the northwards of Castor) one in the other, sayl then right with them, either by day or by night, (in the night there is fired upon them) you shall so run over a flat, through betwixt 2 buyes, which lye each of them upon a tail

Wells.

a tail of a ſand, ſayl boldly in with the foreſayd fire-beakons, until you come againe neare the ſhoare, in 5 or 6 fathom, being come by the ſhoare, run then again alongſt by it, & keepe the ſounding there of as before, al alongſt untill you com before Winterton.

Thwart of Winterton runneth off a dangerous riff, which is dangerous to ſayle about by night, if men doe come too near at, which is upon the end ſo ſteep, that (in 3 fathom or 2 fathom & a half) you ſhall not be a ſhips length off from it. But wen as you (comming from the ſouthwards) keep your ſelf in ſix or ſeven fathom, then you cannot ſayl ſo neare to it. To the ſouthwards of that rif upon the land, ſtandeth a firetowre, which is verie eaſy to be knowne, with a fire-beakon, alſo a little white houſe, when theſe come one in the other, then you are thwart of the poynt of the riff.

To the northwards of this riff upon the land ſtand two white fire-beakons, whereupon there is fired by night for to avoyd this riff. When as you come thwart of the poynt, then are theſe alſo one in the other, ſo that theſe doe ſerve for thwart marks, and the other to the ſouthwards of them for longſt marks, for thoſe that will ſayle about it from the ſouthwards. Comming from the northwards alongſt the ſhoare in 5 or 6 fathom, untill you come by the fire-beakons upon the north ſide, you muſt keep ſomewhat off from the ſhoare, before they come one in the other, or els you ſhould run on againſt the rif. When they are one in the other then they ſtand ſ. w. & by w. from you, and when as the high fire-beakon to the ſouthwards of Winterton cometh to be ſ. weſt, ſome what more weſterly from you, then you are thwart of the point of the rif: you may not alſo run about far within that riff, for then you ſhould lightly bee foule of the grounds on the eaſtwards of it, eſpecially when you come from the northwards for there it is not verie wide betwixt them both.

From Winterton to Haeſbrough poynt, the courſe lyeth northweſt 3 leagues.

Betwixt Haeſbrough & the Admiralshouſe ſtands a ruinous tower upon the ſtrand. When as you keep it & the ſteeple of Haeſbrough one in the other comming from the northwards, then you run right upon the poynt of the foreſayd riffe. Foure leagues without the land lyeth Winterton ſand, the ſouth end where of lyeth about eaſt & the north end northeaſt from Winterton.

Thwart of Admiralshouſe, not far from the ſhoare, lyeth alſo a little plate where no ſhip can go over, but if you goe in ſix or ſeven fathom, you cannot ſayle to neare it, you may alſo runne through in 2 fathom, betwixt this plate & the land.

From Haeſbrough to Cromer, the coaſt lyeth alongſt northweſt and by weſt, and weſtnorthweſt, three or 4 leagues.

The land lieth from Cromer to Bornum firſt weſtnorthweſt and weſt and by north, and then weſt, and weſt and by ſouth 9 or 10 leagues.

From Cromer to Blakeney it is 2 or 3 leagues. At blakeney ſtandeth a high ſteeple, which you may ſee alongſt farre over the land, when it commeth to the little ſteeple, then you have the firſt buy of the channell, which lieth at the ſouth end of the Pole, which is a ſand at the weſt ſide of the channell of Blackeney, go from the firſt buy to the other and alongſt by them, untill you come within the Haven. This is a tyde-haven, where men doe lye dry at low water. Four leagues to the weſtwards of Blackeny lyeth Wels, betwixt them both lyeth the foreſayd ſhoale, called the Poll and Pyper, there it is ſhoale far off at ſea. At the weſt end of this ſhoale, goeth in the Deep of Wels, the beacons that you muſt ſaile in alongſt by, ſtand all alongſt by the Pyper. When Hoebrom ſtandeth eaſtſoutheaſt from you, then you are to the weſtwards of the Pyper, thwart of it is good road in 6 fathom. Wels lyeth then ſoutheaſt from you, and the trees ſtand then alſo againſt the ſteeple, then you may ſayle open into the Haven of Wels, alongſt by the foreſayd beakons.

Blakeney. Poll and Pyper. Wells.

Of the Depths and Shoales about theſe places and in what Depths men may ſee the land.

Five or ſix leagues north and by eaſt & nortnortheaſt from the north Forland or from Margat lyeth a banck, called Kentiſh-knock, upon it is three fathom water. Being by it, you may even ſee the land from belowe.

Five leagues northeaſt from this banck, it is twentie fathom deep.

Northeaſt and by north from the north Forland nine or tenne leagues, and about eaſt from the Naze, eight leagues into the ſea, lyeth a banck called the Galloper, of five, ſix and ſeven fathom depth.

The weſtrocks is a ſtonie ground, lying betweene the Court and Long-ſand, whereupon is no moore then two fathom water at a half floud.

Without that ſand or Harwitch five leagues from the Naze, it is twentie and two and twentie fathom deepe, being there you may ſee the land.

Thwart of Orfordnes you may ſee the land from below, in two and twenty fathom.

Five or ſix leagues without Leyſtaffe & Yarmouth ſoutheaſt and eaſt into ſea, it is 27 and 28 fathom deep, there you may ſee the land.

Four leagues eaſt and by ſouth from land, without the Holmes of Yarmouth lyeth a banck, called the Newſand, which is not deeper then two fathom.

Eaſtnortheaſt at leaſt 7 leagues from land thwart of Yarmouth, it is 15 fathom, the ground red groſſe ſand with little round ſtones, being there you may even ſee the land from below.

Thwart of Winterton and Cromer 7 or 8 leagues from the land, it is 18 and 19 fathom deep, and there you may ſee the land.

Winterton ſand lyeth 4 or 5 leagues from land northeaſt from Winterton.

What moon maketh high water at the places.

At the north Forland a north and ſouth moone maketh high water.

Within the Thames a ſouth and by eaſt moone.

Before the Thames, at Hartwitch and Orfordnes a ſouthſoutheaſt moone.

At Leyſtaff & Yarmouth a ſouthſoutheaſt moon maketh high water.

Without the bancks of Yarmouth, and before Cromer, a ſoutheaſt Moon maketh full ſea.

Betwixt the bancks of Harwitch and the Holmes of Yarmouth the flood falleth ſouth, and the ebbe north.

Thwart of the bancks of Winterton and Cromer the flood falleth ſouthſoutheaſt, & the ebbe northnorthweſt.

Of the Tydes and Courſes of the ſtreames.

From the north Forland the flood falleth to the Recolvers, and over the Brakes weſtſouthweſt, and weſt and by ſouth.

Without about Good-win towards Kentiſh-knock, the flood falleth north and by weſt, and northnorthweſt there commeth the flood alſo againſt it from the northwards, and meet one another by the Galloper, with very great rippeling and noyſe, (whereof this banck is alſo called the Galloper) and falleth to the weſtwards into the ſands & channels, and alſo to the eaſtwards towards Flanders.

Betwixt the North Forland & Orfordneſſe the ſtreame falleth without the ſands ſouth and by eaſt, and ſouthſoutheaſt.

When you are to the northwards of the Galloper, then you can reckon no ebbe, then that which runneth alongſt England to the northwards, the ſtreames fall there all alongſt the coaſts. To the ſouthwards of the Galloper, the ebbe goeth to the contrary to the ſouthwards, and the flood to the northwards.

Courses and Distances.

From the north Forland to the north end of the Goodwin the course is south and by east one great leag.
From the north Forland to Kentish Knock northeast and by north and northnortheast 4 or 5 leagues.
From thence to the Orfordnesse north 11 leagues.
From the north Forland to the Gallopper northeast and by north 9 leagues.
From the Gallopper to Orfordnes northnorthwest, 9 leagues.
From Orfordnes to the Naze southwest 8 leagues.
From Orfordnes or Abre to Leytstaff south and north 8 or 9 leagues.
From Abre to Abreknock eastsoutheast one great leag.
From Leytstaff to Yarmouth with in through the bancks south 2 or 3 leagues.
From the north Forland to the Wielings, the course is east somewhat northerly about 27 leagues.
From the north Forland to the Mase, the course is eastnortheast or somewhat moore easterly about 31 leagues.
From the north Forland to the Tessell or Maerstdiep northeast somewhat westerly 47 leagues.
From the Naze or Harwith to the Mase east 31 leag.
From Orfordnes to Tessel eastnortheast 37 leagues.
From Yarmouth or Leystaff to Walcheren or the westlings southeast, and southeast & by south 32 leagues.
From the poynt of Cromer or Schield, to the Tessell, the course is east 40 leagues.

Of the heights of these lands.

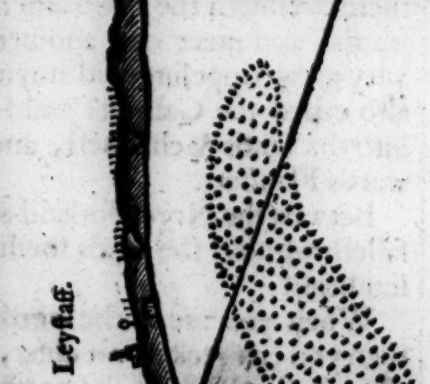
The north Forland lyeth in	51 degrees 30 minutes.
Orfordnes lyeth in	52 degrees 14 minutes.
Yarmouth lyeth in	52 degrees 48 minutes.

How these Lands doe shew them selves at sea.



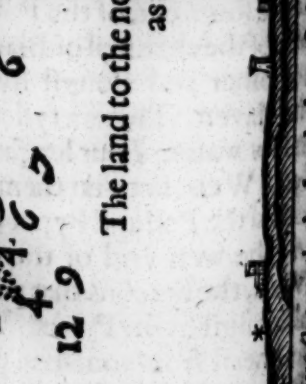
Thus sheweth the coast of England betwixt Orfordnes and Sowle haven.

Thus sheweth the landt betwixt Sowle and Leystaff.





The land to the northwards of Winterton, until past Haesbrough sheweth when you sayle alongst by it, as is demonstrated in these two figures following the A A one to the other.



Thus sheweth the land alongst the north coast of England, betwixt Yarmouth and Cromer, when you sayle crough within the bancks.

Thus sheweth the land alongst the north coast of England, betwixt Yarmouth and Cromer, when you sayle through within the banckes.

Boston
Wrangel
Wyngfliet
Lagerneß
Skegnes
Engemaele
Wilgrip
Sakfliet
Grimsby
Humber flu
Hul
Paal
Polderen
Sambrae
Eelusey
Doesyn
Stellers
Rotzsser
Bridlington
Flamborgh
Flamburger hooft
Tyley crake
Walpoel
Lager Sande
Smitsshuren
Suffen
Capelle
Bornum
Sonck
Flaets
Geps
Elleboog
Elleknock
Deyshil
De Welle
Ravensspure
De Hommen
NORT

De Cuſt
van
ENGELANDT
tuſschen Welles en 't Eylandt
Coket

RIDING

DVRHAM

Nicasteel

Teeſe fl.

Stocton

Vierboeden

Teeſe

Verypole

Hartlepool

Sunderland

Peyer

Hartlepool

Tinfl.

Tinmouth

Rootcliff

3 Roven

Hompsboet

Whitby

Romenhoofd bay

Colsmsborg

Cobbet of the Coggum



The eleventh Demonſtration,

Where in

The Coaſt of Engeland and Scotland are ſet forth betweene Welles and the Iſland Cocket.

BEtwixt Wels & Bornum lieth a banck. You may ride under it in five or ſix fathom, at halfe flood there is upon it no more then two fathom water.

Bornum. He that will ſaile into Bornum, muſt goe in at high water, and he muſt bring the ſteeple againſt the Black-houſe, and ſaile ſo in by the beakons, leaving them on the larboard ſide. Theſe are all tyde-havens.

Chappell. From Bornum to Chappell, the courſe is weſtſouthweſt 2 leagues, to the northwards of it lyeth the Sonck, which is a ſand that falleth dry at low water. You may ſayle about it on both ſides of the Sonck unto Lin.

The Sonck. Eaſter channell of Lin. For to ſayle into the eaſter channell of Lin, then ſayle about to the eaſtwards of the Sonck, and bring that wood of trees, over the poynt of Sitſein or Suytſon, and Chappell eaſt from you, then goe in ſoutheaſt and by ſouth and you ſhall find the firſt buye, then in ſouth and by weſt and ſouthſouthweſt and by little and little more weſterly; untill you come about the poynt, there the buyes and beakons ſhall ſhew you the way.

When you come about the poynt, then you may runne through the ſands, into the norther channell, and ſayle out againe by the ſame into ſea, by the buyes and markes that are thereof. This norther channell lyeth into ſea northeaſt and northeaſt and by eaſt, and is very well buyed and beakoned.

Eaſter channell of Lin. You may alſo ſayle into the weſtwards of the Sonck, to witt, ſouth and by eaſt in alongſt by it and ſo runne to the firſt buye, and then from the buye alongſt by the beakons, unto Lin before the towne. When you come from the eaſtwards, you may well run through within the Sonck, alongſt by the land, cloſe alongſt by Chappell, and in ſouth and by weſt unto the foreſayd firſt buye.

Boſton deepe. For to ſayle from Cromer or Blakeney to Boſt ondeep, you muſt goe on w. & by n. untill you come by the land betwixt the Hommer and Lagerneſſe. *From* the Soecke lyeth a long banck, called the Flats, n. into ſea a league, which at low water falleth dry at divers places. You run with the foreſayd Weſt and by North courſe, (when you are by Cromer or Blackeney a little without the land) alongſt without, or to the northwards of this banck, at high water, you may well goe over it, the ground on the eaſt ſide goeth up flat and playne, run boldly to it without feare, untill you come in foure or three fathom, hee that uſeth his lead can take no hurt of it, but on the inner ſide, that is, on the weſt ſide, it is very ſteepe, ſo ſoone as you be over the ſhoaleſt, you ſhall get ſuddenly deepe water, and good ſand ground, under it or within it, it is good riding for eaſterly winds.

The Flats.

For to ſayle into Boſton deepe, through within the Knock or Elle-knock, you muſt keepe the ſounding of the ſhoare in foure or five fathom, ſo long untill that the poynt of Lagerneſſe be weſtnorthweſt from you. Betwixt the ſhoare and Elle-knock remayneth at low water, five fathom in the middeſt of the channell, but Elle-knock falleth dry at low water. When as Lagerneſſe is weſtnorthweſt from you, then goe on ſoutheaſt, through betwixt Elle-knock and the ſhoale (which ſhooteth of from the ſhoare to the weſtwards of Lagerneſſe) untill that you get againe depth of ſix or ſeven fathom, in this going over remayneth at low water, no more then two fathom, but it floweth there about three fathom up and downe. Being over it, then goe on ſouthweſt alongſt betwixt Longſand and the ſhoale, which lyeth of from the ſhoare, there it is deepe betwixt them both 9 and 10 fathom, you may ſound both ſides, (as well the ſhoale which lyeth of from the land, as Longſand) in five fathom, but the flats is ſomewhat ſteeper then Longſand. Long-ſand.

For to ſayle without Elle-knock into Boſtons deepe, comming (as is before ſayd) to the weſt land, you muſt looke out for the two ſteeples of Ingoldmills, ſtanding ſomewhat to the northwards of Lagerneſſe, bring them one in the other, and then they ſhall ſtand about north-northweſt from you, keepe them one in the other, and goe on ſouthſoutheaſt, untill that the trees upon the poynt bee by weſt Lagerneſſe, come without the poynt of Lagerneſſe, and then you runne through betwixt Elle-knock and Dogſhead, (that is a ſhoale without Elle-knock when the aforeſayd trees come a handſpikes length paſt, or to the eaſtwards of the poynt of Lagerneſſe, then goe on ſouthweſt, and then you runne eight into the deepe, betwixt Elleknock and Longſand, and ſo you ſhall finde betwixt Elleknock, and the poynt of Longſand five fathom depth, being paſt Elleknock, it will be eight, nine and ten fathom deep. Ingold-mills. Dogs-head.

If you will ſayle out of the ſea into Boſton deepe, and not alongſt by the land, as is before ſayd, then bring the foreſayd trees a handſpikes length without the point of Lagerneſſe, which ſhall then ſtand from you about weſtſouthweſt, ſayle in ſo right with them, untill that the high land within Lagerneſſe or Winfleet begin to come even without the poynt of Lagerneſſe, which ſhall then be from you ſomewhat more northerly then weſt, then you are within the point of Longſand. Or elſe there ſtand three little houſes on the ſea ſide, about halfe wayes betwixt Lagerneſſe, & Ingoldmils, when they come to be northweſt from you, & thoſe foreſayd trees without the poynt, then you are alſo within the poynt of Longſand, goe in then ſouthweſt betwixt Elleknock and Longſand, as foreſayd. A little paſt Lagerneſſe lyeth a ſhoale or plate about the middeſt in the fareway, but neareſt Longſand when the trees upon the poynt to the ſouthwards of Winfleet come in the ſecond valle of the high land within Winfleet, then you are right thwart of this ſhoale, edge therefor to one ſide or other, rather towards the ſhoale, there is wideſt, keepe boldly the ſounding of the ſhoale, & run ſouthweſt alongſt by it, untill that the ſteeple of Boſton come over the ſteeple of Butterwyke, that is alſo a flat ſteeple, but ſmaller then that of Boſton ſtanding in a wood of trees, thwart of it runneth the ſhoale ſomewhat off with a poynt, being paſt it, goe on weſtſouthweſt all alongſt by the foreſayd ſhowld, untill that the great ſteeple of Boſton come over the ſecond mill, there it is good anchoring by the weſt ſhoare in five fathom at low water. He that commeth there at low water, muſt anchor and ſtay for the tyde untill halfe floud, before that you may not ſail further in from thence, and then you ſhall not alſo find more then two fathom upon the ſhoaleſt. Butter-wyke.

From thence the Deep lyeth in alongſt by the beakons about ſouth to the third beakon, being paſt that weſtſouthweſt, and then by little and little, more weſterly & northerly, but run all alongſt by the beakons, leaving them on the ſtarboard ſide, at laſt on north into the River.

Upon the poynt of the river ſtandeth a houſe, which is a ſheephouſe, before that you come by it, it ſeemeth as if there were no opening, by reaſon that it is al even green land, run in by it, all alongſt by the land, being paſt it, the River doth open it ſelf. Being come within the poynts you muſt run in betwixt two dikes, a league up untill you come before the towne, in the river it is at half floud everie where deep enough. When as that you come a little within the houſes of the towne on the larboard ſide, there you muſt let fall your anchor and ſtay until that the water begin to fall, then you ſhall have floud enough for to drive to the Kay, there you make faſt with one cable, it doth not begin to bee ebbe there, before that the water be fallen three foot.

An eaſt and weſt Moone maketh in Boſton deepe the higheſt water, but before the towne an eaſt and by ſouth and eaſtſoutheaſt moone. He that commeth from Boſton, and will ſayle out at the deep with a high water, let him look out for the foreſayd high land within Lagernes, when that commeth behinde the poynt of Lagernes, then he may boldly ſet his courſe whether he deſireth to be, either to the eaſtwards, northeaſtwards, or northwards, there is nothing then that can hurt him.

From Lagerneſſe to the Hommer it is about ſeven leagues, moſt north, betwixt them both, about a league to the ſouthwards of the Hommer lyeth a place called Saltfleed haven, a little to the northwards of a ſharpe ſteeple called Wilgrip. Thwart of that foreſayd Saltfleet haven, about an Engliſh mile from the ſhoare lyeth a banck or Sandplate, not verie great, which at low water falleth almoſt drye, you muſt runne about without it, & leave it lying towards the land from you, but yet for need you may alſo ſayl trough within it.

Plate by Saltfleet haven.

For to ſail into the Humber.

For to ſayle into the Humber comming from the northwards, you muſt ſayle alongſt by the ſhoare, and runne about by the north poynt, but comming by the poynt you muſt keepe ſomewhat of from the ſhoare in 4 or 5 fathom, for to avoyd a little taile, which lyeth of from the poynt, being about it, runne to the little Iſland, which lyeth a little by weſt that foreſayd north poynt.

If comming from the ſouthwards you deſire to ſayle to the Humber, then bring the Pawle Steeple (which is a high ſharpe ſteeple ſtanding on the North ſide of the Humber) a little by ſouth the North poynt of the Humber, or over that foreſayd little Iſland, and ſayle ſo right in with it, untill that you come by that little Iſland, being come by it, leave it on the ſtarboard ſide, and run in cloſe by it, for to avoyd a great Sand, called the Bull, which lyeth of from the ſouth ſhoare, almoſt into that little Iſland. When that you come within that little Iſland, then bring the two beakons (which ſtand upon that little Iſland) one in the other, keepe them ſo ſtanding, and ſayle ſo on to the weſtwards towards Grimſby, you leave the Buye upon the Bull lying then on the larboard ſide, and run along to the northwards of it: In this faireway it is ſeven and eight fathom deepe. You may not come neerer the Bull then in ſixe fathome. Before Grimſby you may anchor in three or foure fathome at lowe water, it floweth there at leaſt three fathom up and down, a weſtſouthweſt and eaſtnortheaſt Moone maketh before the Humber the higheſt water. Within the foreſayd Iſland at the north poynt of the Humber, you may anchor in three or foure fathom: There lye commonly Ships that are bound out, and tarrie for the Wind.

Road before Grimsby.

From Grimſby in alongſt to Hull, the courſe is weſtnorthweſt to the end of the Banck or ballaſt Plate, which you muſt leave lying on the north ſide. On the ſouth ſide lyeth alſo a little Plate, there ſtandeth commonly a Beakon upon it, that you muſt leave on the larboard ſide, & run along to the Northwards of it, being paſt it, you may run alongſt by the South ſhoare in 3 fathom. The fareway there is foure, five, and ſixe, and thwart of the foreſayd Beakon eight and tenne fathom. When you come to the end of the Banke, you muſt edge up to the Weſtwards about by the poynt on the South ſide, but there runneth of a Flat which you muſt avoyd. Being a little about that poynt you ſhall ſee the Towne of Hull, lye before you, there you may anchor before it in ſixe, ſeven, or eight fathom: An eaſt and weſt Moon maketh full ſea before Hull. He that will anchor upon the ballaſt-plate, let him bring the flat ſteeple which ſtandeth a little to the northwards or the eaſtwards of Hull to the high poynt of Paul, and keepe them ſo ſtanding untill that he come to the plate, there it is beſt for to anchor upon it.

From the North poynt of the Humber called Spurne-head to *F*lambrough head, the courſe is northnorthweſt nine or ten leagues, betwixt them it is ſhoale water of ſix, ſeven, and eight fathom deepe. Flambrough head hath many white ſpots and Chalke Hils, eſpecially upon the north ſide towards Fyley. Flambrough hath a Head or Pierre. A league to the weſtwards of it on the ſouth ſide lyeth a little Touwne called Burlington, which hath alſo a Pierre. You may anchor there in the Bay in ſix or ſeven fathom. Flambrough head. Burlington.

Three leagues by weſt Flambrough head lyeth Fyley, in a round baye to the ſouthwardes of a poynt that lyeth out, which hath a Pier or Head, where you may lye within it, but it falleth there drie at lowe water. Fyley.

Without the head of *F*yley lyeth a rock under water, called *F*yley bridge, betwixt it and the Pier you may well lie a flote with a ſhippe of an hundred laſts, in five fathom at low water, and have ſhelter for a northead and eaſt winde. Fyley bridge.

From the poynt of *F*yley to *S*charbrough it is northweſt two leagues. *S*charbrough hath 2 Pieres or Heads, where you may runne within them at high water from the ſouthwardes, but at low water it falleth there alſo drie. Men come in there from the ſouthwards. Scharbrough.

From *S*charbrough the coaſt lyeth alongſt by Robbinhoods bay, untill before Whidbye, moſt northweſt, but paſt Widbie the land falleth in weſtnorthweſt & by little & little more weſterly unto the Tees. Robinhoods bay.

Robbenhoods bay is a good roade for a ſouthſouthweſt and weſt winde, there men lie in ſeven or eight fathom.

Whidby is a tide haven, which falleth drie at low water, at the eaſt ſide of the haven runneth of a riffe of rocks, where you muſt take heede. For to ſayle in there, you muſt runne in betwixt the two beakons, untill that you come in betwixt the two lands, and anchor there. Whidby.

From Whidbie to the Teeſe the coaſt lyeth moſt weſtnorthweſt, and weſt and by north, about ſeven leagues, betwixt both lye Huntley foote and Redcliffe. Huntley foote is a high hill, lying on the ſea ſide, about 4 leagues to the eaſtwardes of the Tees. Redcliffe lyeth about halfe wayes betwixt Huntley foote and the Tees, it is a cliffe of ſuch verie redd earth, that when the ſunne doth ſhine againſt it, it is to ſee to like redd cloth theſe two are verie good markes, for to know this coaſt by. Huntley foote. Redcliffe.

Cloſe to the ſouthwardes of the mouth of the Teeſe lye three Riffes, which lye about a halfe league eaſtnortheaſt into ſea, which are verie foul and ſtonie, and fall drie at low water, upon the north ſide they are verie flatt, ſo that you may ſound about by them, in five, ſixe and ſeven fathom, but on the ſouth ſide are ſo ſteepe that comming neare them, and ſounding in thirteen and fourteen fathom, you ſhould be upon them, before you ſhould be able to heave the lead the ſecond time.

A league and halfe to the northwards of the Teeſe lyeth Hartlepoole, upon a poynt that lyeth out almoſt like Hartlepoole.

like an Iſland. For to goe in there you muſt runne into a bight to the ſouthwards of the towne with in a head, untill you come againſt the towne, there you ſhall lye drie at low water.

Hartlepoole. About halfe wayes betwixt Hartlepoole & the Teeſe, runneth of alſo a riffe of rocks thwart from the ſhoare a good wayes into ſea, come no nearer in then 5 or 6 fathom. There ſtandeth a mill to the northwards of the towne Hartlepoole, if you keepe that to the weſt ſide of the towne Hartlepoole, then you cannot ſail upon that foreſayd riff, but if you bring the foreſayd mill a little to the weſtwards from the town, ſo that you may plainely ſee through betwixt the mill and the towne, then you ſhall not faile to ſaile upon that riffe.

For to ſayle into Teeſe comming from the northwardes, you muſt obſerve theſe markes following. A good wayes to the northwardes of Hartlepoole, a little to the ſouthwardes of Sonderland, and a little within the land lye upon the high land, two hommocks cloſe one to the other, verie eaſy to be known, of faſhion like womens breaſts, called the Paps, keepe theſe 2 hommocks even without the poynt of Hartlepoole, which ſhall then ſtand from you northweſt and by north, and ſayle ſo on to the ſouthwardes, and you ſhall fall before the Tees, and ſhall not ſayle to neare the ſands that lie out before the mouth of the Tees, and lye of about a halfe league into ſea.

On both ſides, as well on the north ſide, as the ſouth ſide of the Tees ſtand 2 little white houſes for firebeacons: If you come from the northwardes and get ſight of them, then bring firſt the 2 ſouthermoſt one in the other, which ſhall then ſtand from you ſouth and by eaſt, ſayle right in with them, untill that the other 2 which ſtande on the north ſide of the Teeſe, come alſo one in the other, then leave them on the ſouth ſide, and ſayle in right with them that ſtand on the north ſide, and ſo you ſhall runne in amidſt the channell, there is upon the barre, or ſhoaleſt, at low water no more then five foote, but it floweth there with a common tyde, at leaſt 2 fathom up and downe. A ſouthweſt moone maketh there full ſea. If when you come from the ſouthwardes, you will ſayle into the Teeſe, then bring the innermoſt of the 2 firebeakons (which ſtande on the north ſide) at leaſt a handſpikes length, or the length of a capſtane barre, to the northwardes of the other, and runne ſo weſtwardes towards them, untill that the two firebeakons on the ſouth ſide are one in the other, then ſaile in right with them, as hath beene ſaide, untill that the 2 firebeakons on the north ſide come one in the other: when you have them one in the other, runne in right with them, untill that you come by the north ſhoare, & then cloſe alongſt by it.

When as that you come ſo farre in paſt the firſt firebeakon, to wit, that you may ſee Hartlepoole betwixt the 2 firebeakons, there you may anchor in three, 4, or five fathom, or when Hartlepoole commeth betwixt the foreſaide firebeakons, then go ſouthſouthweſt, untill that you come by the ſouth ſhoare there it is alſo good anchoring. Further it is pilots water unto Stockton, for there within, the deepes doe ſhifte oftentimes, and that in ſhorte time, 3, 4, or 5 times in a ſummer.

He that will ſayle in there with northerly windes, and a floud, muſt reckon well his tydes, for the floude falleth ſtrong to the ſouthwardes over the groundes, and ſhould there by bee lightlie carried behind the bank to the ſouthwardes of the buye, which lyeth upon the poynte of the banck.

Beſides this foreſaid channell there runneth yet another channell through the grounds, which lye of from the north poynt of the Tees. For to ſayle in there, you muſt take marke of the two high lands within the land, to the ſouthwardes of the Tees, bring them within a handſpikes length one to the other, or bring the Paps to the weſt ſide of Harlenope, then ſhall alſo a foreſayde two high lands come within a handſpikes lenght neare one to the other, ſayle in right with them, and ſo you ſhall runne right into that new channell, alongſt through that a foreſayde ſand, and come againſt the buye (upon the ſandes, on the ſouth ſide of the Deepe) againe in the right fareway. When that you get again deeper water, or have the two firebeakons on the north ſide one in the other, then go in towards them, and further as hath been before ſaid.

About ſeven leagues to the northwardes of the Tees leyth the river of Sonderland, a little to the northwardes of the Paps, which are very good markes for to know the land by thereabouts. When the Paps are ſouthſouthweſt from you, and that you are about an Engliſh mile from the land, then you are right before the river of Sonderland, the ground is thereabouts indifferent cleane, but ſomewhat ſtonie, you may anchor there in 4 or 5 & 6 fathom. On both ſides, as well on the north poynte, as the ſouth poynte of the River it is ſtonie. On the north poynte ſtandeth a beakon in the water, there you muſt runne in, within a little ſhippes length alongſt by it, being paſt that you ſhall gett deeper water, to wit, a fathom & a halfe, & 2 fathom at low water, but upon the barre remaineth no more then three foote. With a common ſpring & high water there is about 2 fathom & a half, or a little more.

After this aforeſayd firſt depth of a fathom and a half or two fathom, you ſhall meet againe with a ſtonie floore, about three ſhips lenghts broad, upon it is at high water about 11 or 12 foote deep, according as the tydes ſhall runne: being over there, it is again deeper. A little paſt that is a narrow place, where a long ſhippe ſhall ſcarce be able to wend, within it, it is wide enough, and everie where good anchor ground.

From the Tees to Tinmouth the courſe is northnorthweſt 8 or 9 leagues. Two leagues to the ſouthwards of Timmouth lyeth the poynt of Sonderland, but cloſe to the ſouthwards of Tinmouth goeth in the River of Newcaſtle. From the poynt of Tinmouth ſhooteth of a ledge of rocks, you muſt ſayle in by it, leaving it on the ſtarboard ſide. The markes for to ſayle into this River are two firetowers, or firebeakons, which ſtand upon the north ſhoare, bring them one in the other, or the innermoſt (that is the higheſt) a little to the northwards of the outermoſt or loweſt, & ſayle ſo right in, alongſt by the aforſayd ledge of rocks on the north ſide, and ſo you ſhall have upon the ſhoaleſt two fathom at halfe flound, a ſouthweſt moone maketh there ful ſea. The ſouth ſhoare is flatte, you may lead it in there with the ſounding pole, for ſhips, that goe not deepe, in ten foote at halfe floude. When you come within, runne all alongſt by the north ſhoare, untill paſt the little towne Sheels, edge then over to the other ſhoare, untill you come through the crooked reach, there the river lieth up againe a little to the northwards, & then to the ſouthwards to Hawkes-bill, & about by it to the towne New-caſtle. Sonderland.

Seven or 8 leagues to the northwards of Tinmouth lyeth the Cocke Iſland, betwixt them both about half wayes lyeth a River called Bly, where the French men doe much ſayle to fetch coale. From the north poynt of this river runneth off a ledge of rocks a great ſhot of a caſt-peece, about ſoutheaſt into the ſea, but the ſouth ſide, & the coaſt to the ſouthwards of it, is very cleane and ſand-ſtrand. Upon the ſouth poynt ſtand two beakons: If you will ſayle in there, bring them one in the other, and ſayle right in with them, and then you can take no hurt of the foreſayd ledge or riffe of the north poynt. When that you come by or thwart of the outermoſt of the 2 foreſayd beakons, you ſhall ſee there by it another ſmaller beakon, that ſtandeth upon a little ledge of rocks, that ſhooteth of from the ſouth poynt, leave that on the larboard ſide, and runne in alongſt cloſe about northwars of it. The foreſayd ledge of Rockes on the north ſide remaineth at high water (a good wayes from the land, alſo at a ſpring-tyde) above water, within it is a bight, there it is good lying for a Bly.

north

north or northeaſt winde, and there remaineth at low water two fathom depth. In the mouth of the River it is with an ordinary tyde and high water about two fathom deep, or ſomewhat more, and it floweth there two fathom up and downe, ſo that at low water it falleth allmoſt altogether dry.

Cocket Iſland. The Cocket Iſland, is a very little Iſland, and not high it lyeth about a halfe league from the land, you may come to anchor in it for an eaſt, ſouth, and ſoutheaſt wind, but the winde comming to the northwards of the eaſt, maketh there a bad roade, for you muſt lye betwixt the Iſland and the maine land where you have no ſhelter for a north winde. On the ſouth ſide of the Iſland the ground is foul, & a little to the ſouthwards of the Iſland, runneth off a foule ledge of rocks from the ſhoare, untill thwart or paſt the Iſland. He that commeth from the ſouthwards muſt keepe the Coaſt of Bambrough without the Iſland, or els he ſhould not faile to faile upon the poynt of that foreſayd ledge.

Betwixt that ledge and the Iſland it is alſo very narrow ſo that a man ſtanding at low water marke upon the rockes of this ledge, ſhould allmoſt be able to caſt with a ſtone unto the Iſlands. For to ſayle in there, take heed unto theſe marcks here after deſcribed: there ſtandeth a houſe upon the ſea ſide, which is a Salt kettel, and alſo a Caſtle ſomewhat further in within the land, which doth ſhew it ſelf high enough, bring them one in the other, and then they ſhall ſtand ſomewhat more northerly then weſt from you, and runne ſo right in with them, and ſo you ſhall runne in right amidſt the channell betwixt both, being come within edge up behinde the Iſland, & anchor there in five or ſix fathom.

About this Iſland there run alſo manie more divers little Rivers in to the land, but they fall moſt drie at low water.

Of the Depths & ſhoales about theſe places, and in what Depths men may ſee the land.

Thwart of Winterton and Cromer, ſeven or eight leagues from land, it is eighteene and nineteene fathom deep, and there you may ſee the land. Northeaſt and northeaſt and by north from Cromer lyeth a Bancke, whereupon remaineth at halfe floud no more water, then 4 fathom, from thence you may ſee the land indifferent well.

North and by eaſt from Blackeney lyeth a bancke, whereupon remaineth at halfe floud no more water then five fathom. In eighteene fathom thereabouts you may ſee the land. From thence to the poynt of Chappell it is all ſhoaly.

About northnorthweſt and north and by weſt from Winterton-ſand lyeth the bancke before Cromer 5 leagues without the coaſt.

To the northwards of the Humber of Hull, you may ſee the land in 25 fathom.

Flambrough-head men may ſee in five and thirtie fathom.

Scharbrough men may ſee from below in five & forty fathom.

Of the Tydes and Courſes of the Streames, about theſe foreſayd places.

Before Crommer a ſoutheaſt Moone maketh high water.

At Blackeney, Wels, Bornum and Lyn, an eaſt and weſt Moone.

Befoore the Humber of Hull an eaſtnortheaſt and weſtſouthweſt Moone.

From Blackeney to *F*lambrough-head, the floud falleth ſoutheaſt and the ebbe northweſt.

At Flambrough and Fyley, in the Peer a weſtſouthweſt moone maketh full ſea.

At Scharbrough and Robbinhoods-baye a ſouthweſt and northeaſt moone.

In the Tees and at Hartlepoole alſo a ſouthweſt and northeaſt moone.

Before the River of Newcaſtle a ſouthweſt & northeaſt moone maketh alſo the higheſt water.

Thwart of Flambrough-head, *S*charbrough, the Teeſe, & alſo thwart of the river of Newcaſtle, the floud falleth ſoutheaſt, and the ebbe northweſt.

To the northwards of the Tees, the floud falleth ſouthſoutheaſt alongſt the land, and from the Tees to *S*charbrough ſoutheaſt by eaſt.

How theſe lands doe lye one from the other, and from other lands.

From Crommer to Blackeney weſtnorthweſt 3 or 4 leag.
From Blackeney to Bornum trough within the ſand weſt 7 leagues.
From Bornum to Chappel weſtſouthweſt 2 leagues.
From Chappell to Elleknock, or the north poynt of Boſtondeep, the courſe is northweſt and by north 5 leagues.
From thence to the north poynt of Humber north, and north and by weſt 7 leagues.
From the north poynt of the Humber to Flambrough-head northnorthweſt 9 leagues.
From the north poynt of the Humber to the Teſſel, eaſt and by ſouth & eaſtſoutheaſt 55 leagues.
From Flambrough-hean to *F*yley northweſt and by weſt, and weſtnorthweſt 3 leagues.
From *F*yley to *S*charbrough northweſt and by weſt, and weſt northweſt 2 leagues.
From *S*charbrough to Whidbye northweſt 5 leagues.
From Whidbye to thee Teeſe, the courſe is firſt weſtnorthweſt and afterwards weſt & by north 7 leagues.
From the Teeſe to Tynmouth northnorthweſt 8 or 9 leagues.
From Whidbye to Tinmouth, the courſe is northweſt and ſoutheaſt 16 leagues.
From Tinmouth to the Cocket Iſland northnorthweſt 8 or 9 leagues.

Heights.

The northpoynt of the Humber of Hull in 53 d. 35 min.
Flambrough-head lyeth in 54 degrees. 5 minutes.
*S*charbrough in 54 degrees. 12 minutes.
Tynmouth or the River of Newcaſtle in 55 deg. 10 min.

How theſe Lands doe ſhew themſelves at Sea.



Thus ſheweth the land betwixt the Tees and Flambrough-head when you ſaile alongſt by it.



Thus ſheweth the land betwixt Tinmouth & the hills of Huntleyfoot & Redcliffe, to the ſouthwards of the Teeſe, when you ſaile alongſt by it.

Thus

De Cuſten
van
SCHOTLA
met de Eylanden van Orcaneße, van
Coket tot I. Sande.

SCHOTLAND

Edenburgh
Liet ofte Seeton
I. Heinkieff
Queens fuer
S. Lans
Donde
Caſtel
Brought
S. Andreas
Abroe
Monros
Northeske
Stronhoost
Bas
Barwyck
Gaſwyck
Dunſtaburgh
Aſſemouth
Stapels
De Schaßen
Coket ofte
Caggan eylant
I. May
't Schuy
Roothoost
Stronhoost

C. Strathat

Orcadés Insulæ

I. S. Martin

I. Hyplant

C. de Nobrunt

I. Ede

Fara

Westmene

Ilhoy

I. Rouse

Egelse

I. Conet

Platta

Porome

Dissom

Orcanese

Dungisse

Pissanesschare

Pichlantsschare

Catenesse

Denet

Vois hoed

Old wyck

Dornoch

Rosse

Lawernes

Caterie

Vuisse

Norne

Dunkeld

Berwald

Kinderne

Koeck van Elgin

Calone

Spey fl.

Aberdin

Banse

Slaves

Douern

Oost Aberdin

Ethane

Passage

Boekenesse

Boekenes

Ratterburg

Duytsche mylen 15 in een graadt

Spaansche mylen 17¼ in een graadt

Engel: en Franc: mylen 20 in een graadt



Thus sheweth the land betwixt Tinmouth and Cocket Island.

The twelfth Demonstration,

In which

The east side of Scotland, is shewed, from the Island Cocket and Orcaneis.

FRom the Cocket Islands to the Staples the course is northnorthwest & north & by w. 8 or 9 leagues. The Staples, they are high Islands & rocks right to the eastwards of Bambroug, lying at least 3 leagues from the land northeast into sea, a little to the northwards of them lyeth the Holie Island. To the southwards or the westwards of the Holie Island is a baye where you may lye landlockt almost for all windes, against the Castle is the best roade: you may also run in there from the southwards, through betwixt the Staples and the maine land.

Betwixt the Staples and Holy Island lye two suncken Rocks, which at low water come verie neare even with the water, the westermost towards the Holy Island, is called the Goldstone, the eastermost by the staples, is called the Plough. For to avoyd them when you will sayle through betwixt the Staples & the Holy Island, whether you come from the s. wards or the n. wards, then bring the Steeple of Teustenbrough over the Castle of Bambrough & keepe them so standing, and then you shall run through betwixt them both, this channell lyeth so through n. e. & s. w. From the outermost end of the Staples to S. Abbens head, the course is northwest 8 or 9 leagues.

From Holy Island to S. Abbens head it is northnorthwest 7 or 8 leagues.

To the northwards of S. Abbens-head men doe runne in unto Lieth and to Edenbrough in Scotland.

S. Abbens head & the Island the Bas lye east and west 4 leagues asunder. The Island May and S. Abbens head northwest & southeast 4 great leagues. May & Bas lye one from the other southwest & by west and northeast & by east three leagues & a halfe. The Bas is a high round Rock cleane round about, which you may sayle alongst by on both sides. Betwixt the rock and the south shoare it is ten and twelve fathom deepe, but the common faire way is alongst to the northwards of it. Betweene S. Abbens head and the Bas it is most part a cleane Coast, but without anchor ground. The Island May is greater then the Bas, & also cleane round about, except on the east side, there it is foule.

From S. Abbens head alongst to the northwest of the Bas, the course is west and by north and west northwest foure leagues, and from by north the Bas to the Island Inchkieth west and west and by north about five leagues. Betweene the Bas and Inchkieth by the s. shoare lye many Rockes, little Islands and foule grounds, whereat divers places is road, but are not to be used, but by them which are there verie well acquainted. Inchkieth and the Island May lye s. w. & by w. & n. e. & by e. 7 great leag. asunder. Inchkieth is somewhat along small Island, a league to the northwards of it lyeth an out poynt on the north coast called Kingorneſſe, before it and about it lie some little Rocks under water, but a little to the eastwards of the eastwards of the point is good anchor ground & road for westerly winds. Betweene that point and the Island May, or the point of Fifsnes on the north shoare lye divers little Havens, where of some of them doe also yeeld out coales, but are little or nothing used by the Hollanders. On both sides of Inchkieth is good ground, & good lying as well for westerly as easterly winds.

From Inchkieth to Lieth it is southeast a league. Before Lieth about halfe an English mile from the shoare lyeth a Rock upon which standeth a Mast (with a crosse or some other thing of wood upon the top of it) for a beakon. At high water the Sea floweth over it, & at low water it falleth dry. With a spring tyde at low water men may go on foot to it. From the east side of that Rock lyeth of a riffe almost unto Inchkieth. You may also run through to the s. wards of Inchkieth betwixt that foresayd Riffe & the south shoare, but is not to be done, but by them which are there exceeding well acquainted: There is altogether full of Rockes & foule grounds. When as you sayle in to the northwards of Inchkieth you must leave the foresayd Mast on the larboard side, and run about to the northwards of it, & then towards the south shoare, and anchor about halfe an English Mile by west Lieth, & also halfe an English Mile from the shoare, in 6, 7, or 8 fathom. Lieth is the Haven of Edenbrough, a tyde Haven which fall dry at low water. Lieth.

From Lieth to Queenes Ferrie there lye on both sides many Rockes, some above and some under water. In the narrow before Queenes Ferrie lyeth a little Island called Inchgarve which you must runne alongst to the northwards of, on the south side it is with a Stone bancke (where men may goe over at low water) fast to the mayne Land, alongst to the northwards of it, it is cleane and deepe. Within that little Island lye Caryn and other places more where men doe lade Coales. Queenes Ferrie.

Under the east side of the poynt to the northwardes of Queenes Ferrie is good road in 2, 3, or 4 fathom, according as you lye farre from the shoare.

A league north from the Island May lyeth the poynt of Fifsnes, lying from S. Abbens head northwest and by north 4 great leagues. From thence to Dondee it is northnorthwest five leagues. Dondee is a good Haven which goeth in betwixt 2 high Lands, being within men doe anchor before the Towne. Farther in upon the River lyeth another Towne called S. Johns, which you may goe up to at high water. Fifsnes. Dondee. S. Johns.

Betweene the poynt of Fifsnes and Dondee lyeth also the Baye of S. Andrewes, there is all over good anchor ground. Foure great leagues n. & by e. from the poynt of Fifsnes, and northeast from S. Andrewes lyeth a great Rock called the Inchkap, which the Sea floweth over at high water, and at low water it falleth so dry, that the Fishermen goe upon it. S. Andrewes. Inchkap.

Seven leagues to the northwards of Dondee lyeth Monrosse, a good Haven, First you must sayle in there amidst the channell, and edge up to the northwards & anchor before the Towne. Monrosse.

Over against Monrosse lye three Hommocks which

shoote out from the other land, bring the middlemost and the houses upon the strand together, then shall you find the middle of the fareway, on both sides of the havens mouth lyeth a blind cliffe.

Betwixt Dondee and Monrosse lyeth an out point called Redhead, about a great League to the Southwards of Monrosse. There standeth a high Tower upon the Land called Abrot.

Redhead.

Stonebay.

From Monrosse to Stone Baye or De Torre, the course is northeast & by North foure leagues. This is a deepe bay and a good Haven for those that are bound to the southwardes, where men may lye landlockt with many Ships.

Aberdyn.

There leagues to the northwards of it lyeth Aberdyn: In this Havens mouth it is three fathom deep. The west point is somewhat foule, therefore you must run in by the east land, untill you come within the Haven, and anchor before the Towne in foure or five fathom. Up to the northwardes is a great Bay, but is shoale on both sides. There goeth through a little Creeke towards old Aberdyn, which is an old ruinous Towne.

Boeckenes.

From Aberdyn to Boeckenes the course is northnortheast twelve or thirteene leagues. Betwixt them both lyeth a tyde haven. Boeckenes is a high Hill and lyeth upon the south side of the point. To the northwards of Boeckenes lyeth a Bay as a Haven called Spy or Spilaert, and right before the shoare lyeth a sand called Ruttenbrugh, which you must take great care thereof as you come from the northwards. From thence the land lyeth in west and west southwest unto the Haven of Rosse or Luvernes.

Spy.

To the northwards of Rosse lyeth an out poynt called Cape Tarbate, right in the bottome of the Baye, betwixt Catenes and Boeckenes, distandet from Boeckenes about 19 or 20 leagues. In this bay are manie haven and sounds, which are deep enough for to come into with great ships. It is from thence to Catenes 14 leagues northeast and by north, Catenes lyeth from Boeckenes northwest and northwest and by north 20, 21 or 22 leagues. From Boeckenes unto the outermost Orckanes it is north and by west and northnorthwest two and thirtie or three and thirtie leagues.

C. Tarba.

The Orkeneys are one and thirtie Islands in number, first Wayets or Elhoy, which lyeth next to Scotland, five leagues about the poynt. About northnortheast off from the poynt of Catenes lye two little Islands Pits and Pich landscare, there you may run through to the westwards betwixt Elhoy and Scotland.

To the northwardes of them lieth an Island called Heynda, with an other Island called Platta, to the northwardes off Platta lyeth Mayland or Ponoma. On the north side of this great Island are all the havens where the ships come to.

Upon the east side of this great Island lyeth another Island called Kabunsa, to the northwards of it lyeth an other Island at the northeast poynt of the great Island, you may also run through there towards Papewester, and leave Sande lying on the starboard side.

Close to Papewester lyeth Fara, to the soutwards of it is Sirza. To the eastwards of Sirza and Fara lye two Island, in the middest of all these Islands, called Eeda and Chapnoza.

Sanda lyeth to the northwards of all these Islands, but Papa and Stronza lye to the southwards of *Sanda*.

To the eastwards of *Stronsa* lyeth an Island called Cuistella, that is the eastermost Island of all, the northermost is called Ronalze or Northernase.

Eleven or twelve leagues northwest from the great Island lye two rocks, the one under water and the other above water, he that commeth from the westwards must take heede of them.

Of the Tydes and Courses of the streames.

On these coasts betwixt Tinmouth & S. Abbens-head a southwest and northeast moone maketh high water.

At Lieth in the Haven a southwest and by west moone maketh full sea.

The floud falleth alongst these coasts southsoutheast, and the ebbe northnorthwest.

At Orcanesse and Boeckenes a southwest and northwest moon maketh high water.

The floudes come about from behind Scotland from the westwards through betwixt Fairehill & Orcanesse, and make there about full sea with a southwest and northeast moon.

From Boeckenesse, the floud falleth south alongst the coast towards Lieth, and the ebb north to the contrarie.

In this fareway it is deep 40, 50 and 60 fathom, in 45, 50 fathom, you may see the land. In this fareway in the sommer the first Herrigs are caught.

Courses and Distances.

From Tynmouth to Staples north and by west 16 leag.
From Staples to Barwicke westnorthwest 3 leagues.
From Barwicke to S. Abbens-head n. n. w. 5 leagues.
From the Staples to S. Abbens-head n. w. 8. or 9 leagues.
From S. Abbens-head to the Bas west 4 leagues.
From the Bas to Inckieth west & west and by north 5 leagues.
From S. Abbens-head to the Island May northwest 3 leagues.
From S. Abbens-head to Fifsnes northwest & by north 4 great leagues.
From Fifsnes to Dondee northnorthwest 5 leagues.
From Tinmouth to Scuytenes northeast 99 leagues.
From Tinmouth to the Naze northeast & by east easterly 103 leagues.
From Tinmouth to the Scawe eastnortheast 130 leag.
From Tinmouth to Holyland east & by south easterly 106 leagues.
From Fifsnes to Stone-Bay north and by east 16 leagues.
From Redhead to Monros northwest. 4 leagues.
From Monros to Stone-bay n. e. and by north 5 leagues.
From Stone-bay to Boeckenes northnortheast somwhat northerly 16 leagues.
From Aberdine to Boeckenes northnortheast 12 leag.
From Boeckenes to Phyloort or Spyloort northnorthwest 3 leagues.
From Phyloort to the poynt of Eglyn west 10 leagues.
From the poynt of Elgyn to the Haven of Rosse or Luvernes west & by s. somewhat southerly 7 leagues.
From cape de Terbate to Catenes n. e. & by n. 14 leag.
From Catenes to Elhoy westnorthwest. 5 leagues.
From Boeckenes to Catenes northwest & northwest and by north 22 leagues.
From Boeckenes to the Orcaneys north & by west and northnorthwest 26 leagues.
From Boeckenes to Hanglip, or the south end of Hitland north somewhat easterly. 50 leagues.
From Boeckenes to Scuytenes east and by north somewhat northerly 72 leagues.
From Boeckenes to the Naze east somewhat southerly 88 or 90 leagues.
From Boeckenes to Boevenb. in Jutland east & by south 106 leagues.
From Boeckenes to Holyland s. e. & by e. 128 leagues.
From Boeckenes to the Tessell s. e. southerly 143 leagues.
From Boeckenes to the Holmes before Yarmouth southsoutheast 108 leagues.
From Aberdine to the Holmes before Yarmouth southeast and by south somewhat southerly 100 leagues.

Heights.

S. Abbenshead in Scotland in 56 degr. 12 min.
Boeckenes lyeth in the height of 57 degr. 55 min.
Catenes in 58 degr. 40 min.
The greatest or the outermost Island of the Orkeneys in 59 degr. 8 min.

How

Eylanden van
HITLANDT
ofte
SCHETLANDT
Fayer hill en Fulo.

Fulo

S. Magni fobrt

S. Magny

Schaarey

EYLANDEN

ofte SCHETLAN

De Zuythoeck

Swaneberg

Slot Zuythaven

Schoofsche ree

Zamborgerhoeft

Brimarhaven

Oost hoek

Peerde Eyl.

Swynborgerhooft

Cominx Eyl.

Fayer hill

Arentsburgh

Bressay

Lerwyck

Hangklip

Eylanden van
HEBRIDES
gelegen achter de noord-west hoeck van Schotlant.

Skilda

Inst

Leeus

S. Patricus

HIT LANDT.

DT.

De Blauwe bergen

Lausort

Ielio

Bloemesondt

Olste ofte Onst

Lelle Sondt

Haskens Sondt

Baltens Eylan den

Mons bay

Mons Sont

Fetlo

Wt scheren

Walsoen

Duytsche mylen 15 in een graat

Spaensche mylen 17½ in een graat

Eng. en Fra. mylen 20 in een graat

Moggenshalm

MVCKINES

Eylanden van FERO ofte FARRE.

Surwage

Middelwage

WACK

Sumwage

Colster

Wilcrmes

Trollo

Wagerfoort

Hesten

Westhals

STROMO

Calbac

Schelling

Sumes

Colsaxt

Grots

Sansen

Mythis

Osterwick

OSTRO

CALSO

CVMBO

In dese voort comen veel Walvisschen

Bordewyck

BORDO

WIDRO

SWINO

OYA

De Bisschop Farro

Dreng

Quabo

Sandy Tollenes Quanes

Sandwick

Sumburgh ras

Tinel dimen

Dalesses

Sandwick

Sandwick Quanes

Sandwick Sant.

Sandwick Sant

Sandwick Quanes

Sandwick Sant

Sandwick Quanes

Sandwick Sant

Sandwick Quanes

How theſe Lands doe shew them ſelves at Sea.



Thus ſheweth Boeckenes when you ſaile alongſt by it.



In this form ſheweth the land Catenes, when you ſaile alongſt by it.



Thus ſheweth the northeaſt poynt of Orkenes when you ſayle alongſt by it.



Thus ſheweth the land of Scotland to the northwards of Aberdyne, when you ſayle alongſt by it 2 leagues from the land.

The thirteenth Demonſtration,

Where in

Are ſet forth the Coaſt of Fayrehill, Hitland, and the Iſlands there abouts as alſo the Iſlands of Fero, and ſome Iſlands behind the northweſt Corner of Scotland.

Faire-hill.

THe Iſland Fairehill lyeth from the eaſt point of the Orcanais northeaſt, and from Bockeneſſe north and by weſt about ſeven and thirty leag.

On the weſt ſide of Fairehill is at ſome places foule ground, but upon the ſoutheaſt ſide is good anchor ground, there you may anchor every where, but there ſtretcheth a riffe on the eaſt ſide of the ſhoare off ſoutheaſt two leagues in to ſea.

Fulo.

Fulo lyeth from Fairehill northweſt and by north tenne leagues, betwixt them both lyeth the ſouthermoſt poynt off Hitland, lying from Fairehill northnortheaſt 7 or 8 leagues, and from Fulo eaſt and by ſouth, 4 leagues.

The ſouthweſt coaſt of Hitland, (to wit from the ſouthermoſt poynt to the northweſt poynt) lyeth northweſt and by north eight or nine leagues. On the ſame ſouthweſt ſide, over againſt the Iſland Fulo lyeth a Sandbay, where men may anchor, but on the eaſt ſide of this Bay, it is ſomewhat foule. From that northweſt or weſt poynt off to the north end, the land of Hitland lyeth northeaſt by north, & ſouthweſt and by ſouth, twenty or one and twenty leagues.

S. Magnus.

Two leagues to the northwards of the foreſayd weſt poynt lyeth the Haven of S. Magnus, which is a broad Sound, within it is good anchor ground in ſixteen or ſeventeen fathom depth, according as you ſhall be farre within the land. On the north ſide lyeth a high rocke, where you muſt run in to the ſouthwards of. And on the ſouth ſide lyeth two or three rocks, which you muſt leave on the ſtarboard ſide, when you ſayle in there.

Even to the eaſtwards about the ſ. poynt of Hitland, lyeth a fayre Sandbay, where you may anchor in twelve or thirteen fathom, from thence to Hanglip, the courſe is northeaſt ſomewhat eaſterly 8 or 9 leagues.

Hanglip.

Hamborough haven.

Betwixt Hanglip and the ſouth poynt lyeth an Iſland, which you may ſayle about on both ſides, within it lyeth Hambrough Haven, or the Scottiſh Haven which is a lade place for the Hamburgers and Scots. This Haven is alſoo called Bremer Haven. There lyeth alſo a high ſteepe poynt to the ſouthwards of Hanglip, to the ſouthwards off it men doe runne into Broad-Sound, the cheifeſt Haven off all Hitland, which is deepe and hath cleane ground, there men doe lye landlockt for all winds.

Broad-ſound.

From the Broad Sound lyeth a Sound in alongſt to the northwards, through the land, which commeth out againe into the ſound to the northwards, and ſo maketh an Iſland of the land whereupon the high hill Hanglip lyeth. When as you will ſayle in there from the northwards, that is to the northwards of Hanglip, you muſt runne in neareſt by the ſouth ſhoare, and edge to it berimes. In this channell betwixt both lands lye two Iſlands or rocks, the greateſt lyeth neareſt the north ſhoare, and the ſmalleſt neareſt the ſouth ſhoare, betwixt them both lyeth alſoo a ſuncken rocke, which at low water is uncovered, and at high water you may know it by the breaking upon it. When as you will ſayle in here, you muſt leave the foreſayd greateſt Rocke, with the ſuncken rock, on the ſtarboard ſide, and the ſmalleſt Rock on the larboard ſide, there is upon the ſhoaleſt three fathom and a halfe water.

Within this haven lye alſo two havens at the north point, which lye into the land, where is good lying.

When as you will ſayle from this foreſayd haven through within unto the Broad-ſound, you ſhall meet, ſcarce halfe wayes with a rock, from which lyeth off a riffe towards the weſt ſhoare thvvart of it you muſt runne cloſe alongſt by the vveſt ſhoare, for to avoyd that riffe.

To the northwards of Hanglip, the land of Hitland lyeth north, north and by eaſt, and northnortheaſt, at leaſt north, and at ſome places you may ſayle in trough Hitland, eſpecially to the northwards of Walſoeu, where a faire broad Sound lyeth nortweſt trough, there is good anchor ground to finde at ſome places, for theſe that are there acquainted. From Hanglip to the northeaſt point of Hitland, the courſe is northnortheaſt ten leagues, there lye ſome outrocks called the Outſchares. From thence alongſt to the north point of Hitland, the courſe is north about 4 leagues.

Outſchares

Bloem-ſound.

A little about the eaſt point goeth in a faire haven, called Bloem-ſound, lying in ſouthweſt. On the weſt ſide lyeth a long rock, you muſt ſayle into the eaſtwards of it, and anchor a little within the Haven, it is there within

all cleane sand ground, and good lying Bloem-sound lyeth in first (as hath been said) southsouthwest afterwards south and south and by east, on both sides is good anchor ground, there you may saile altogether through, and come out againe through Jelle-sound into sea, about the Island Fero.

Names of the Islands of Fero. The greatest and chiefest Islands of Fero are 12, in number, as Suydro, Sando, Moggenes, Wage, *S*tromo, Ostro, Calso, Cuno, Bordo, Wydro, Swyno and Fulo.

The little Islands of Fero are ten, as Littledymen, Stoerdymen, Schuyvo, Dalsfles, Hesden, Trallo Colster, Moggensholme, the Monck, and the Bishop. Besides these there are yet some rocks and little Islands, to seven or eight in number.

Suydro. The southermost great Island called Suydro, lyeth most southeast and northwest, about seven or eight leagues. At the southeast end of this Island lyeth a high rock, called the Monck, or Sambie, after the name of the first or southermost haven in Suydro. Betwixt the

Monck Samby. Monck and the southeast end of the Island Suydro, is a race or Well, which men must avoid especially with spring tides.

Upon the west side of the Island Suydro are no havens for to save any shippes in, but it is altogether high steepe land. On the North side are maine havens, where men may sayle into and save ships, as Sommersound or Hest, Hofwycke. Vrobie, Quaelbie or Rane, all broad sounds or havens, a countrie man or Pilot can bring you in there every where to your desire.

Moggenesholm. From the Northwest end of Suydro to Moggensholme, the westermost and outermost Island of Fero, the course is northwest and by north, and northnorthwest about eight leagues.

Moggenes. At the east end of Moggenesholme lyeth Moggenes, to the eastwards of it lyeth the Island Wage, and to the

Waghe eastwards of Waghe goeth in a faire Sound from the southwards of from the Island Sando about Hesten & the Island Colster, for you may run in about these Islands on both sides, & leave the great Island Stromo on the east side, and so come into Waghe. In the middest of the Sound of Waghe, goeth up a haven to the eastwards into the great Island Stromo, there in you may anchor in ten or twelve fathom, but the Sound is at least twenty fathom deep.

Moggenes & the northeast end of Fero lie eastnortheast or a little more northerlye, and westsouthwest about fifteene leagues asunder. Betwixt them both lye tenne Islands, and betwixt each Island, is a faire broade & deep Sound where of the fourth of from Moggenes is called

Somsound. Somsound. All these Sounds lye most northnorthwest and southsoutheast through the land, and upon all these Islands stand Churches, except upon Ostra, which never the lesse is a great Island.

Scalhead. *F*rom the southeast end of Suydro to Scalhead, or the southeast end of the Island Sando, the course is north and by west about five leagues. Betwixt Suydro and Sando lye the little Islands, Little Dymen, Stoer Dymen, *S*chavo and Dalsfles.

Little Dymen. Stoer Dymen. From *S*chalhead untill within the Island Mulso (lying before *S*tromo) the course is north and by west foure leagues, there you may every where anchor, where you will in twentie, thirtie or fortie fathom. If any man comming in out of the sea, desireth to see a good road or haven under the Islands of Fero, he shall keepe that middlemost great Island Stromo northwest and northwest and by west from him, and then hee shall see upon the middest of the Island *S*tromo a high steepe hill called *S*chellinck, which he must sayle right in with, and so he shall meete with that foresayd Island Mulso, a low Island, which you may sayle about on both sides, but it is best for to runne in there at the south, under this Island is all over good anchor ground. Right over against this Island, on the great Island, lyeth Torshaven; the chiefest haven of Fero, where all the trade of merchandize is.

Torshaven. From Torshaven or the Island Mulso to the northeast end of Fero the course is northeast, and northeast and by east about twelve or thirteene leagues, betwixt them both lye seven Islands, and betwixt each Island (as hath been sayd) goeth a broad *S*ound through the land: lying through about northwest, northwest and by north, and northnorthwest. The north end of Fero is about foure leagues broad, and lyeth northwest and southeast, and is called Fulo, thwart of it lieth the Bishop.

Fulo. He that desireth to sayle of from Mulso into Somsound, let him goe on northeast and by north three leag. unto the poynt of Bordenes, then up northwest of from Bordenes, & then he shall espie a Church upon the Island The Bishop. Calso, which he must leave on the starboard side, & goe in along westnorthwest untill he come into the Bight of the Island Ostro, and anchor there in seventeene or eighteene fathom.

These Islands of Fero lye in a triangle, it is from the southeast end of Suydro to Fulo, or the north end of Fero northnortheast and southsouthwest 21 leagues a sunder.

*F*rom Scotland westwards and to the northwards of Ireland, lye many Islands, where of we shall here describe some, with so much perfection, as thereof is yet knowne.

Names of the Island. The names of the principall Islands lying there are these: Areu, Ila, Jona, Mulla, Bragedull, Hun, Lewis, S. Patricius, S. Maria, S. Colane, S. Petous, Epth, and *S*. Kilda, these are the greatest. There are yet some small Islands: as Rona, Ghent, Trauta, Fladde, Grand Melul, Petit Melul, *S*talpan, Cannay, Rum, Egghe, Mule, Cutte, Carndenbrough, Gronsay, *S*. Karbo, Lismont, Swinoy, Machare, Gegay, Caray, & Navarsay. All these Islands doe lye and belong under Scotland, and are those which by the Cosmographers are called Insulæ Hebrides.

Barre or Rona. The Island Barre or Rona is the northermost Island lying behinde Scotland, & lyeth from Fulo about westsouthwest 37 or 38 leagues, it lyeth by two other little Islands about a greate league one from the other.

The Islands of Lewis lye from Rona southwest distant sixteen or seventeen leagues, and from the north end of Lewis to S. Kilda, it is southwest and by west, 16 leagues.

On the east side of S. Kilda is a good roade for a west and northwest winde. This Island lyeth by the other little Island where off the two are not very great, upon that which lyeth to the westwards, you may see some houses stand, and these two little Islands lye tenne leag. to the westwards of the great Island of Lewis. Upon the coast of Lewis lye also two rowes of great rocks, like as if they where little Islands, lying one from the other south & north somewhat easterly about 7 or 8 leagues.

The southermost lye by 3 little Islands, but the northermost lye by eight small little Islands or rocks.

The Island of Lewis is devided into many parts, the which men may sayle through at many and divers places. Lewis with the Islands belonging to it lye southsouthwest and south and by west about 29 leagues.

But on the eastside goeth a broade Sound through of five or six leagues. Men sayl in close by the Island of Lewis, about southsouthwest untill past the Island Cheut.

*F*rom thence the *S*ound lyeth through betwixt the great Island Bragadull & Lewis south & south & by west towards the west end of Lewis, called the Ephts, then you must leave Mulla and Ila, with divers many other Islands on the larboard side.

Jona, Ila, Mulla & Bragadul are 4 of the greatest Islands, which are lying on the west coast of Scotland, and lye close by the mayn land, but there are many havens and Sounds, so that there you may sayle in and about them every where.

At the northwest point of Ireland lye also some Islands, which you may sayle trough & round about them all.

Betwixt Rona & Orkeyns lye also some Islands which also you may sayle trough betwixt and round about.

He that falleth with these Islands must be very carefull and circumspect, for the most part of them are inhabited by wild and savage people.

In Lewis and the Islands thereabout a southwest and north-

northeaſt moone maketh the higheſt water and likewiſe alſo without the north poynt of Scotland.

Of the tydes & courſes of the Streames.

In Hitland within the havens & Sounds a ſouthſouthweſt & northnortheaſt moon maketh full ſea. The flood runneth there to the eaſtwards, and the ebbe to the weſtwards, eſpecially at the ſouth end and north end of Hitland, and ſo fall thwart through the Sounds and havens.

In the Iſland of Fero a north and ſouth moon maketh the higheſt water.

Under the Iſlands of Fero goe very hard tydes, with great turnings, the floud commeth there out of the weſt and weſtnorthweſt, the ebbe out of the eaſt and eaſtſouthеaſt and fall ſoo alongſt through the Iſlands, there you muſt reckon your tides there after, when you will ſayle from the one Iſland to the other, there are two wels or Maelſtreames, the one at the ſouth end of Suydry, and the other a league within Scalhead at Quaelnes.

Although the tides doe run ſo ſtrong through theſe Iſlands yet nevertheles it floweth not there foure foot up and downe.

How theſe lands doe lye one from the other, and from other lands.

From Fairehill to the northeaſt poynt of Orcaneys ſouthweſt 9 or 10 leagues.
From Fairehill to the ſouth end of Hitland ſouthſouthweſt and ſouth and by weſt 7 or 8 leagues.
From the ſouth end of Hitland to the Iſland Rona weſtſouthweſt 46 leagues.
From the north end of Hitland to the rocks of Rocol weſtſouthweſt 127 or 128 leagues.
From the ſouth end of Hitland to Fero weſtnorthweſt, & northweſt and by weſt 61 leagues.
From the north end of Hitland to the ſouth end of Fero weſt and weſt and by north 58 leagues.
From Hitland to the eaſt poynt of Iſland, the courſe is northweſt and by weſt about 130 leagues.
From the north end of Hitland too Gryp northeaſt & by eaſt the north-end of 115 leagues.
From Hitland to Stadt eaſtnortheaſt 66 leagues.
From Fero to Rona, the courſe is ſouth and by eaſt 45 or 46 leagues.
From the ſouth end of Fero to Rokol ſouthweſt weſterly 85 leagues.
From Rona Lewis, the courſe is ſouthweſt 16 leagues.
From the north end of Lewis to Saint Kilda ſouthweſt 16 leagues.
From the ſouth end of Lewis to the northweſt poynt of Ireland, the courſe is ſouthſouthweſt about 27 leag.
From S. Kilda to the north end of Hitland northeaſt and by eaſt 39 leagues.

Of the heights of theſe lands.

The ſouth end of Hitland lyeth in 59 degr. 48 min.
The north end of Hitland lyeth in 60 degr. 50 min.
The ſouth end of *F*ero lyeth in 61 degr. 15 min.
The north end in 62 degr. 20 min.
The Iſlands of Rona lyeth in 58 degr. 46 min.
The north end of Lewis lyeth in 58 degr. 18 min.
The Rock Rokol lyeth in 58 degr. 20 min.
The northweſt point of Scotland lyeth in 58 degrees 30 minutes.

How theſe Lands doe ſhew themſelves at Sea.



When Fairehill is weſt and ſouth 3 or 4 leagues from you, it ſheweth thus.



When Fairehill is weſt from you, ſee Hitland northweſt from you, it ſheweth thus.



When Fairehill is ſoutheaſt and ſoutheaſt and by eaſt 3 or 4 leagues from you, it ſheweth thus.



When Fairehill is northweſt and northweſt and by weſt 4 leagues, it ſheweth thus.



Fairehill being 5 leagues ſouthweſt and by weſt from you ſheweth thus.



When Fulo is northweſt from you ſo far, that you may even ſee it out of the top, it ſheweth thus.



When the ſoutheaſt end of Hitland is weſtnorthweſt from you, then ſheweth the land as in theſe three figures the A A, B B one to the other.





 Thus



Thus ſheweth Hitland, when it lyeth northweſt and by weſt about 4. leagues from you.

Bremerhaven. Point of Broadſound. Hanglip.



In this forme ſheweth Hitland, betwixt Hanglip and Hamburger-haven.



Thus ſheweth the land to the northwards of the haven of Broadſound, Hanglip northweſt from you.



Five leagues to the northwards of Hanglip, the land ſheweth thus, being about a league off from it, Hitland lyeth in there with a great bight, with many Iſlands.



Thus ſheweth Hanglip, when it is northweſt from you eight leagues.



When as the north end of Hitland is ſoutheaſt and by eaſt from you, then it ariſeth thus.



When S. Kilduyn is ſouthweſt about five leagues from you, it ſheweth thus.



When the Iſland Lewis lyeth eaſt from you then it riſeth thus, and then you are without S. Kilda.



This Iſland lieth alſo upon the coaſt of Lewis.



S. Kilda 6 leagues ſoutweſt from you, it ſheweth thus.



S. Kilda northeaſt from you 4. leagues, it ſheweth thus.



S. Kilda ſouthweſt and by weſt 4. leagues from you, it ſheweth thus.



Fulo 4. leagues from you, it ſheweth thus



This Iſland lyeth weſtſouthweſt from Scotland.



Thus ſheweth the Iſland Barre or Rona, when it is 4. leagues ſ. ſ. e. from you.



This land lyeth on the northweſt poynt of Scotland towards Locherne.



The ſouth poynt of Fero weſtnorthweſt from you, 5 leagues, it ſheweth thus.



The ſouth poynt of Fero northweſt, 6 leagues from you, it ſheweth thus.

Pascaart
Vande zeecusten
van
RVSLANT,
Laplant, Finmarcken, en Spitz-
bergen.

80 79 78 77 76 75 74 73 72 71 70 69 68 67 66 65 64

Noordhoeck
Vogelhoeck
't Voorland
Zuydhoeck
of Kynaat
Clock hay
Hasen sond
Ysm Mayen Eylandt
Maelstroom
Werey
Ruest
Iruen ooch
Stech
Ocuevos
Saken
Herligelant
Wyck
Schongen
Roosberg
Dronten
Ostrafiord
Wesop

Duytsche mylen 15 in een graat

Spaensche mylen 17½ in een graat

Eng. en Fra. mylen 20 in een graat

Wybe Iansz water

Lees Boreland

C. Blanco

Whales head

Deerooms sand

Staas Foreland

Black point

Gebroockten landt

Hoopen Eyland

Beeren Eylandt

Noord caap

Kola

Kandalex

Ombay

Warliga

CORELEN

Archangel

I. Colgoyen

Carona

Colcova

C. Barso

I. Kildwyn

Lambascha

Swetenoes

Klema

Zalowitza

Kerroda

Versche R.

Soute Rivier

Soute Riu

Kieht

C. Kirrik

Warthuys

Domesnes

Pazereka

Kegor

Lodges gat

C. Dinga

Onega R.

I. Kolgoyen

I. Kilduyn

I. Tourie Nabbe

I. Colgoyen

I. Kilduyn

I. Lampas

Xida

Couloy

17

FINMA

Sandtwaer

Malanger

Sanien

Rodhelle

Lockfielle

Rollen

Wærøi

Lofodga

Osmyfioer

Westrol

I. Anenas

I. Loffoer

5 10 15 20 25

Duytſche Mylen 15 in een graadt

5 10 15 20 25 30

Spaenſche Mylen 17½ in een graadt

20 25 30 35

R C K E N

Dronten

Schongen

Werdal

Heyligerlander leen

Nomendael

Heiligelandt

Traen-pogh

Ruft

The first part of the New LIGHTNING SEA COLUMNE, OR SEA MIRROUR.

THE SECOND BOOKE,

Of the

EASTERNE NAVIGATION,

Containing

The Deſcription of the Sea-Coaſts of Norway, Finmarck, Lapland, & the whole White Sea.

The firſt Demonſtration,

Where in

Are ſeth forth the Coaſts of Norway, from Dronten to the Iſland Tromſound; as alſo John Mayes Iſland, and the New-found-land of Spitsburgh.

FRom the Iſland Gryp to the Nomen-dals Iſlands, the courſe is northeaſt, eighteene leagues, but from Gryp to the Iſland Ruſt, north and north and by eaſt four and ſixtie leagues. Betwixt them ly (beſides the Nomen-dals Iſlands) alſo the Iſlands Holyland, & Traenoch. Traenoch & Ruſt lye thirteen leagues aſunder. From Ruſt to Wero, the courſe is northeaſt and by north nine leagues, but to Loffoert northnortheaſt three and thirtie leagues. Betwixt Wero and Loffoert lyeth the Maelſtreame, where you may ſayle through, but at ſtill water. By the weſt poynt of Loffoert you may runne in, & make roade under it. And alſo you may runne through from thence within betwixt the Iſlands and the main land, all along unto the North-Cape.

Betwixt the Iſlands Weſterholl, Sanien and Tromſound, you may alſo runne in at divers places, and make road. Thwart of theſe Iſlands lye here and there in ſome places ſuncken rocks and foule grounds, a great league & more without the land. He that ſaileth alongſt this coaſt, may be care-full the of.

Of the Tydes and Courſes of the ſtreames, about theſe foreſayd places.

On theſe coaſts a ſouthſouthweſt and northnortheaſt moon maketh full ſea. The flood commeth there out off the northweſt and weſtnorthweſt, and falleth alongſt Finmarck towards the North-cape.

Courſes and Diſtances.

From Ruſt to Loffoert northnortheaſt and northeaſt & by north	33 leagues.
From Loffoert to Sanien northeaſt eaſterly	36 leagues.
From Sanien to Suyro northeaſt and by eaſt	40 leagues.

Heights.

The Maelſtream lyeth in about	68 degrees.
The Iſland Sanien in	70 degrees.

How theſe Lands doe ſhew themſelves at Sea.

Loeffert. east and by ſouth.



Ruſt eaſt and by ſouth from you ſheweth thus.



When the eaſt end of Loeffert is ſoutheaſt and by eaſt from you, it ſheweth thus, with the land to the weſtwards.

When

O

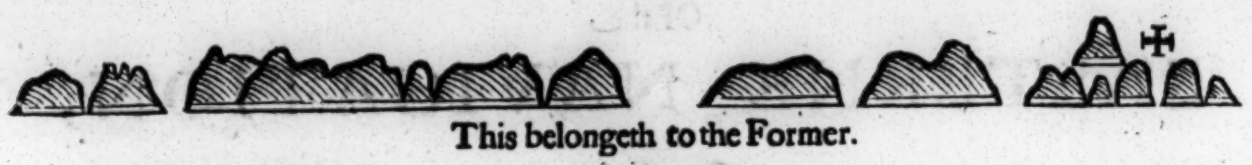


When Loffoert is ſoutheaſt from you 6 or 7 leagues, it ſheweth thus.



When Loffoert is eaſtſoutheaſt from you, it ſheweth and the land betweene thus.





This belongeth to the Former.



The eaſtend of Weſterholl ſheweth thus, when as you ſayle alongſt by it, about 7 leagues off from it.



Theſe two figures belong at the croſſes one to the other.



Thus ſheweth the land of Sanien, when the 2 high hils upon the eaſt end are ſoutheaſt and by ſouth, & the poynt, with the cliff ſouth and by weſt from you 4 leagues. When as the two foreſayd high Hils upon the eaſt end are ſouth from you, then they are right one in the other.

The ſecond Demonſtration,

Where in

Are ſeth forth the Sea-coaſts and Iſlands of Finmarcken, from Sanien to north Kijn or north Cape.

Surroy.

FRom the Iſland Tromſound to Surroy it is eaſtnortheaſt ſomewhat northerly 15 or 16 leag. To the eaſtwards of the Iſland Tromſound goeth in the Tromſound betwixt the Iſland Fogelden and Skyfeu, as you ſaile in there you leave the Iſlands Loppen, & Loppen-kalf lying on the larboard ſide without the other Iſlands, within it are divers Iſlands, bayes and ſounds, where you may ſayle in, and ſeeke road, as Oxefioert, Biurfioert & more other.

Fogelden. Skyrfeu. Loppen. Loppenkalf.

Betwixt Loppen and Surroy men doe ſayle through Suyerſound and Stiernerſound into the river of Altenbotten, and then betwixt them they leave on the ſtarboard ſide Niuſſioerd, Oxefioerd and Langefioerd. On the larboard ſide about by the weſt poynt of Suroy, on the land of Suroy, leyth a Haven, where by is alſoo a Fiſher village, both called Haeſwyke, Suroy is about ten leagues long, and lyeth on the off-ſide, eaſtnortheaſt.

Altenbotten.

Haeſwyck.

Nine or ten leagues to the eaſtwards of the Iſland Tromſound, about three leagues without the land and weſtnorthweſt 5 leagues from the weſt-end of Surroy lyeth a ſhoale of rocks a little under water. John Huygen of Linſchoten in this ſecond voyage to Nova Zembla, in the yeare 1595 ſailed with his ſhips upon it in faire weather and ſmooth water, that the ſheating of his ſtemme was beaten of two ſhips; but after ſome beating the ſhipp turned off with the ſtrong current. It is to be thought that there lye more then men can ſee, or as yet are diſcovered.

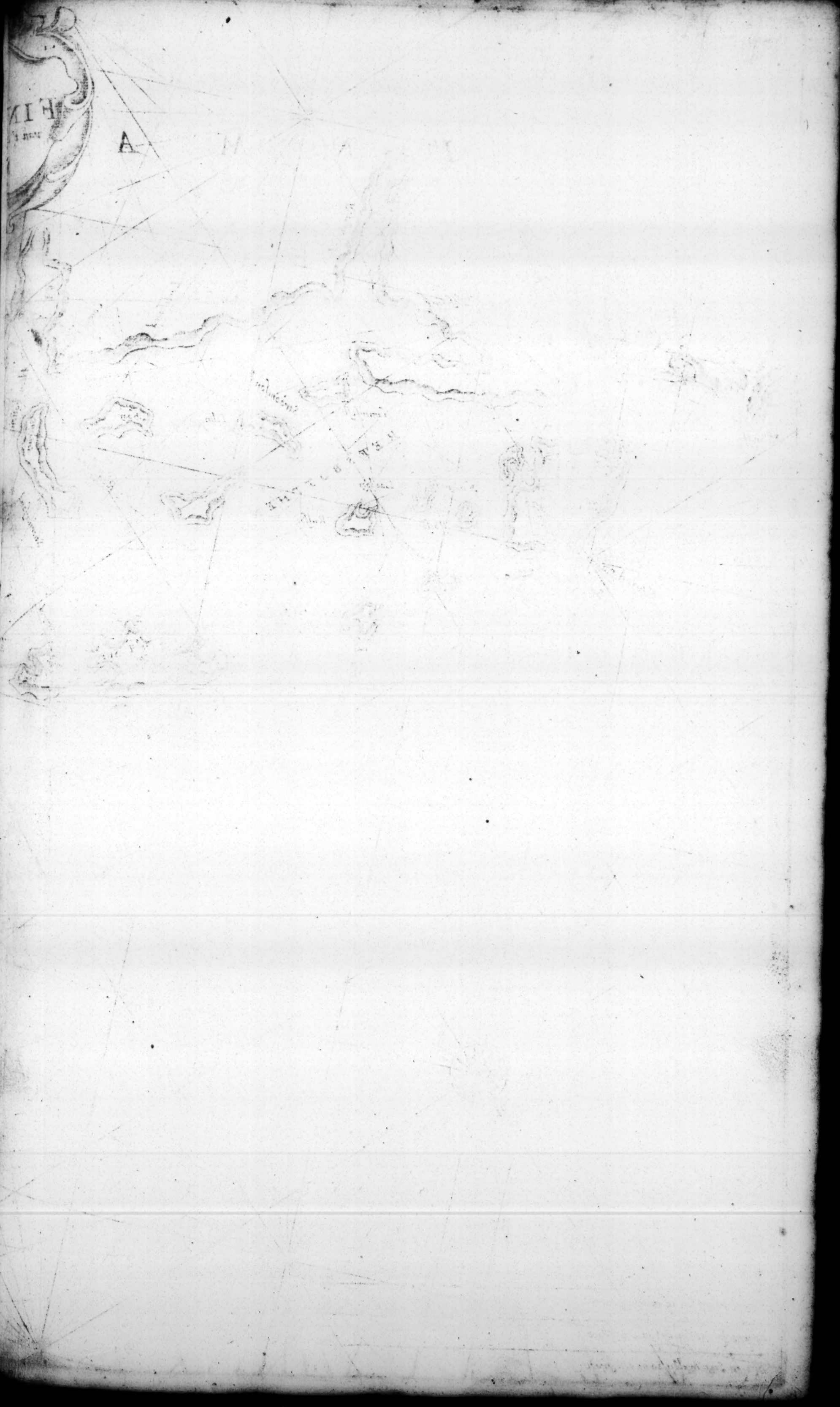
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About ſix leagues eaſt and by north from the eaſt end of Suroy, lyeth the Iſland Ingen, betwixt them both lye alſo Reef-holme and Shipholme little Iſlands, which you may ſayle about on both ſides, untill under Ingen or Suroy.

When as you come in betwixt Suroy and Ingen, there lyeth thwart of from Suroy towards the other land, a good haven, called Hamerfeeſt. A little further in lye two high little Iſlands, and over againſt them a road called Slechtnes. Betweene Hamerfeeſt and Slechtnes, before that you get Slechtenes, lyeth a bay on the land of Suroy, where is good road in 25 or 30 fath. cloſe by the ſhoare. A little paſt theſe Iſlands on the land of Suroy, over againſt the river of Alten, is a good road called Goeſhop beeing a fayr ſandbay.

Between Ingen & the north-cape, or the Iſland Magereu lyeth Homſbuy, and Iſland which you may ſayle round about, having on the northweſt ſide a bay, called Akefioerd, where men may make road for ſoutherly & eaſterly windes, on the ſoutheaſt ſide is a bay called Knaarwyke, where men may make road, and lye ſheltred for weſterly and northerly winds.

The north-Cape is the northermoſt poynt of the Iſland


A

FINMA

Kynaes

Ostfioord

Schuitengberg

Laxefioord

Storrehille

Posangerfioord

Posangerness

Camm

Noordkyn

Maggerwoe

Noordcaep

Bosmanshaven

Hoogstraet

Stappen

Stappenwyck

Stappen

Telmsnyp

Ydefioord

Ryssfioord

Repfioord

Hasenfiord

Lerffioord

Comets fioord

Hasmerfest

Stroomsond

REESBOTNHEN

Telm

Hoey

Ronsond

Stierneesond

Harey

Laedoey

Mosoe

Rulsoe

Kuagwyck

Reyfholm

I. Ingem

Schipholm

Gelfiord

Tingfilling

Meyfiord

Burgoy

Sandwyck

Sandfiord

Camen

Sanden

Duytſche mylen 15 in een graet

Spaenſche mylen 17½ in een graet

Fra. en Eng. mylen 20 in een graet

Caerte
van
IN ARCKEN
...n tot Noordkyn

R C K E N

Sanien

Oxefiord

Spillerum

Vloe

Fogelde

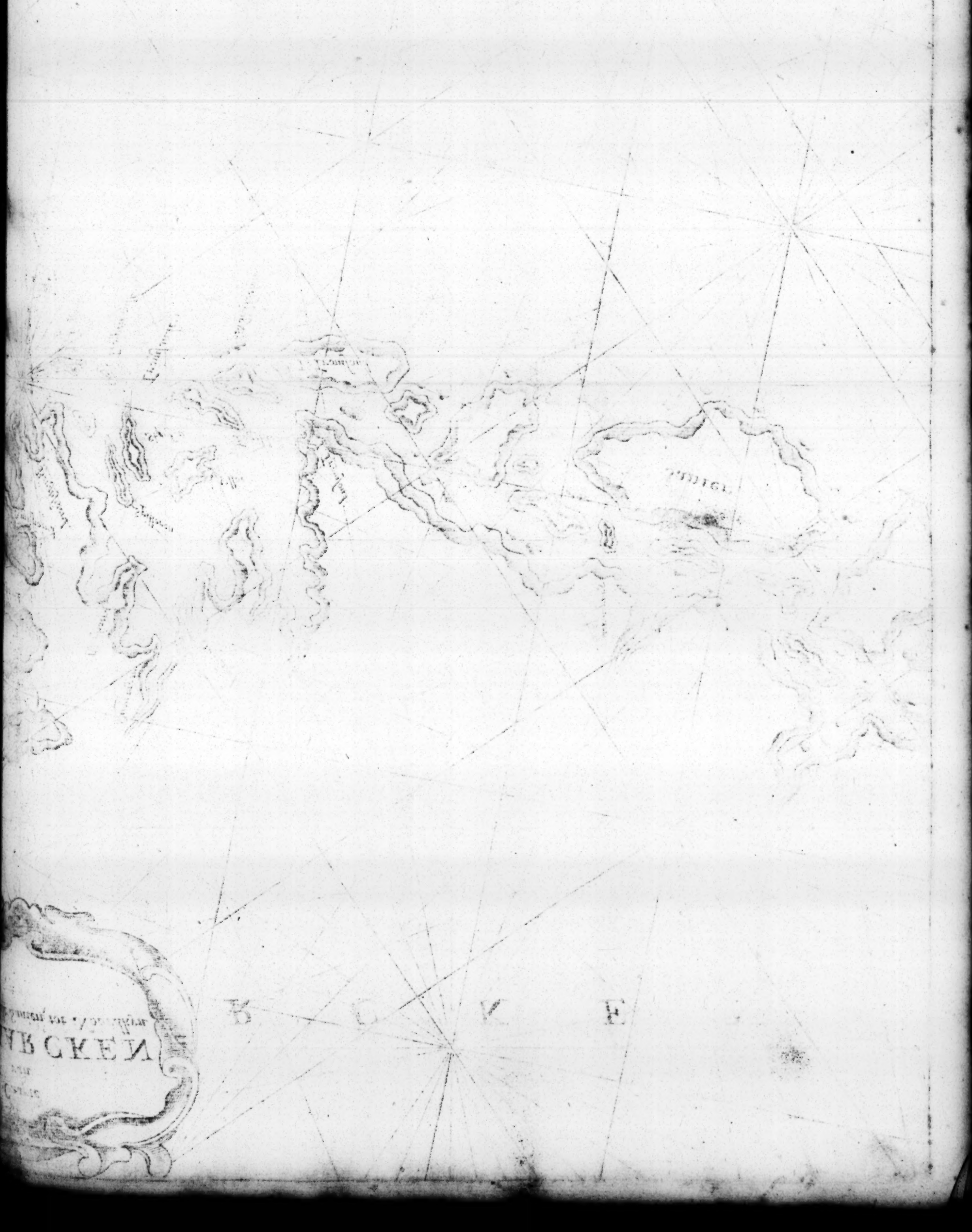
I. Tromsond

Tromsondt

Noordsoelen

Sandsont

Lappen calf


B
C
K
E

Iſland Maggereu, a little to the weſtwards of it lye the little Iſlands of Stappen.

On the ſouth ſide of Maggereu even about the eaſt point, lyeth Keelwyck a good haven. On the ſame ſouth-eaſt ſide, by the ſouthermoſt poynt of Maggereu, lyeth a little Iſland called Altenſoleu, the Sound betwixt that little Iſland, & the land of Maggereu is called Maggereu-ſound: there is good road, and ſhelter for allmoſt al winds: Men may run in through Suyerſound to the weſtwards of Suroy, within Suroy, Ingen, Helmſbuy, & other more Iſlands to the Southwards of them, a long through divers channels to the ſouthwards of Maggereu, and come out againe into ſea betwixt the North-Cape and North-Kyn.

From the North-Cape weſtwards the coaſt lyeth alongſt the Iſlands weſt and by ſouth about 37 leagues, & then from thence weſtwards it falleth away more ſoutherly.

Of the Tydes and Courſes of the ſtreames.

Between Suroye, and the river of Alten a ſoutweſt and by weſt and northeaſt and by eaſt Moone maketh high water.

At the North-Cape a ſouthſouthweſt & northnorth-eaſt moon.

To the weſtwards of the North-cape the ſtreames come out of the northweſt and weſtnorthweſt, and fall alongſt Finmarck towards the North-Cape.

Courſes and Diſtances.

From the Iſland Tromſound to the weſt-end of Suroye eaſtnortheaſt northerly 15 or 16 leagues.
From the eaſt-end of Suroy to Ingen eaſt and by north 6 leagues.
From Helmſhuy to the North-cape eaſt and by north 6 leagues.
From the North-Cape to North-kyn eaſt and by ſouth 11 or 12 leagues.

Heights.

The North-Cape lyeth in the hight of 71 degr. 30 min.

How theſe Lands doe ſhew themſelves at Sea.

When this poynt with the * is weſtſouthweſt from you it ſheweth thus,



Noortfoelen with the land to the weſtwards ſheweth thus, when the poynt * is ſouthweſt and by weſt from you.

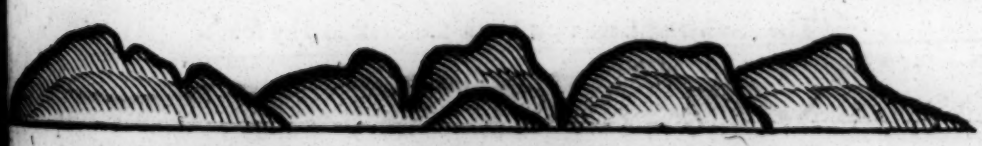


The land to weſtwards Foelen ſheweth thus, when it is ſouthweſt and by ſouth from you.

When ſoutherfoulen is ſouthweſt and by ſouth from you 3 leagues, it ſheweth thus,



Noortfoelen ſouth and by weſt from you 3 leagues, ſheweth thus.



Thus ſheweth Suroy, as you ſaile alongſt by it 5 leagues off.

Shipholm. Iſland without Suroy,



When as Shipholm is ſoutheaſt and the Iſland without Suroy is ſouth about four leagues from you, then they ſhew themſelves thus,

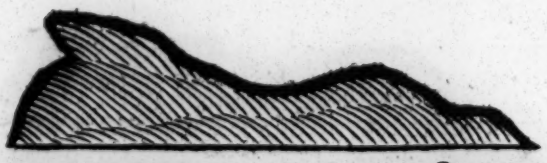


Thus ſheweth the land Ingen, when it is eaſtſoutheaſt 4 leagues from you.

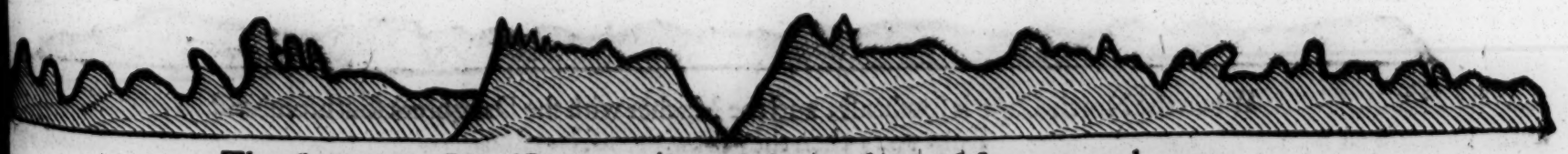
Road of Ingen.



Thus ſheweth Ingen, when this Hill is 1 league ſ. and by eaſt from you.



This Hill lying upon the Iſland Lappen, you may ſee over Suroy as you ſaile alongſt by Suroy from the north end to the ſouth end.



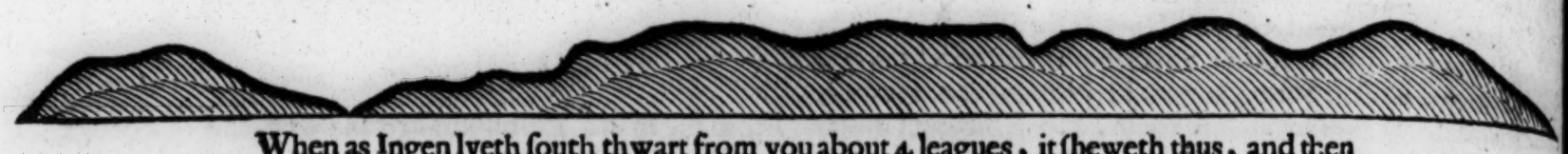
Thus ſheweth the Iſland Lappen, when it is ſouth and by weſt from you, 4 leagues.



Lappen ſouth and by eaſt from you, 4 leagues ſhewet thus.



Lappen ſheweth thus ſouthweſt and by ſouth from you, 4 leagues.



When as Ingen lyeth ſouth thwart from you about 4 leagues, it ſheweth thus, and then Shipholme lyeth ſouth and by weſt from you.

Long-hill.



Thus ſheweth Ingen, when this Long-Hill is ſouthweſt and by weſt from you.



When Helmſey is ſouth or ſomewhat more weſterly about 3 leagues from you, it ſheweth thus.



When as Helmſey is ſouth and ſouth and by weſt 5 leagues from you, it ſheweth thus.



Helmſey being ſouthweſt ſeven leagues from you, ſheweth thus.

Southſouthweſt.



Thus ſheweth Helmſey being foure leagues off from it, when the flat hill is ſouthſouthweſt from you.



In this forme ſheweth the Iſland Stappen, when it lyeth ſouthſouthweſt 4 or 5 leagues from you.



Thus ſheweth Stappen, when it is 5 or 6 leagues ſouthweſt from you.



The eaſt end of Stappen ſheweth thus, when you ſayle alongſt by it.

North Cape ſouth and by eaſt.

The Mother with the Daughters ſoutheaſt and by ſouth.



Thus ſheweth the North Cape ſayling alongſt by it, the poynt being from you as above is ſhewed.

South and by eaſt.



Noord-kaap.

The Noord-kaap ſouth and by eaſt from you ſheweth thus.



When the Mother with the Daughters is eaſtſoutheaſt from you, the land ſheweth thus.



When the North-Cape is ſoutheaſt, and the Mother with the Daughters ſouthſoutheaſt from you, then they ſhew themſelves thus.

Thus



De Cuſten
van
NOORWEGEN
en Laplandt. vande Noord-kyn tot aen:
de Rivier van Kola.

L A P L A N D T

Petzingamon

Petzinghe reca

Stoven

Coningen

Oerſon

Iiets

Mokkagoeba

Waranger

Aynoe

Rivier van Kola

Tsepena

Koerwens Laus

Viſschers Eylant

Kegor ofte Oofter Haven

Duytſche mylen 15 in een graat
1 2 3 4 5 6 7 8 9 10

Spaenſche mylen 17½ in een graat
1 2 3 4 5 6 7 8 9 10 11 12

Engel. en Fran. mylen 20 in een graat
1 2 3 4 5 6 7 8 9 10 11 12 13

N O O R W E G E N

Diesholm

Het Eylandt

Slot

Wardhuys

N O O R W E G E N

Nordmeer

Hoop

Tanefiorden

Kynnæs

Noordkyn

Caepe

Tanebag

Omnasfiorden

Slettenes

Waronger

Kybaer

Domenes

I. Kerroe

Blanke

Hammingbergh

Sabe foort

Poots foort

Kongsfiord

Maskorf

I. Wardhuys

Northbury.

Tanebury.





Thus ſheweth the North-Cape ſailing alongſt by it about three leagues from land, when you are cloſe by the land, you may ſee the Mother alongſt above the land.

Northkyn. Mother with de Daughters.



Thus ſheweth the North-Cape, when as the Mother with the Daughters are ſouthſouthweſt foure leagues from you, then the North-Kyn lyeth ſouthſoutheaſt from you, as is here above demonſtraded.

Southweſt and by ſouth. Southweſt. Southweſt and by weſt.



Thus ſheweth the North-Cape the poynt being from you, as ſtandeth there above Written, and then you may ſee the Mother from the hatches appeare even above water.



Thus ſheweth the North-Cape, when it is weſt and by north from you, and that yon are 3 or 4 leagues without North-kyn.

Southſoutheaſt.



Thus ſheweth North-Kyn being ſouthſoutheaſt eight or nine leagues from you, then lyeth the North-Cape nine or then leagues ſouthweſt from you, and then between both you may ſee yet more land in the ſouthſouthweſt.

The third Demonſtration,

In which

Are shewed the Sea-coaſtes betweene the North-Cape and the River of Kola.

North-kyn. EAſt and by ſouth about 11 or 12 leagues from the north-Cape lyeth north-Kyne. From north-Kyne to Tannebay it is eaſtſoutheaſt 10 or 11 leagues between both, it is all a cleane coaſt, without Rockes or foule grounds, a high ſteepe craggie land, without any ſtrand.

When as you come ſayling alongſt paſt North-Kyne, towards Tannebaye, you ſhall meete firſt with the poynt of Slechtnes, a plaine poynt lying out, verie eaſy to be known: and then Omega a Fiſher village, ſtandeth on the Sea ſide, even there to the eaſtwards of it goeth in the Tanne-bay. Tannebay, which is a great deepe River which lyeth in firſt ſouth, & afterwards ſouthweſt, farre within the land, & doth devide it ſelf into two parts, at the mouth of the River, it is at leaſt two leagues or more broad, and all over verie deepe. He that is bound into the Tannebay, muſt run in alongſt by the weſt ſhoare, becauſe he muſt lye by the weſt ſhoare, on the eaſt ſide is no road or place, where men may anchor.

On the foreſayd w. ſide are manie points & bayes to ſee to as if they were roads, but you muſt ſaile paſt them all ſo long, untill that you ſe on the ſame w. ſhoare a rounde hil, whereupon ſtandeth a Warder, a little paſt that, ſtand ſome Fiſhermens houſes, upon a low hommock, thwart of theſe houſes runneth of from the land a low flat point, you muſt runne in behind that point, & anchor before thoſe houſes, with an anchor to ſeawards & a hawſer faſt on the land.

A little to the eaſt wards of Tannebay lyeth the poynt, & the land of Matkorf, from thence to Wardhouſe the coaſt lyeth ſoutheaſt and by eaſt, ſoutheaſt, and moſt ſoutheaſt & by ſouth ſixteene leagues, betwixt them there is much high plaine land. Halfe wayes betwixt both, but neareſt Wardhouſe, lyeth a high hommock upon the high land, to ſee to like a caſtle, or Countrie houſe, verie eaſy to be knowne, being thwart of it cloſe by land, it ſeemeth as if there wherea great Sound, where men might ſaile into. Wardhouſe are three little Iſlands with ſome little rocks alſo by them, the ſouthermoſt is the greateſt of the three, which onely is inhabited, upon it is a village of about 300 Narway houſes with a caſtle, it is about a halfleague long, and lyeth an Engliſh myle off from the land, lying as the coaſt moſt ſouth & north, betwixt both, it is all over deep water. On the ſouth ſide of this Iſland, lyeth a haven or great baye about half wayes the Iſland, and likewiſe one alſo on the north ſide, ſo that theſe two bayes doe come ſo neare one to the other that there remaineth no more then a narrow chindle ſtrand about a ſtone caſt broade, dividing ſo the Iſland almoſt into 2, the eaſtermoſt part is the ſhorteſt, & higheſt, the weſtermoſt the longeſt. Cloſe upon the ſtrand, on the eaſt ſide of the ſouther-haven lyeth the Caſtle, to the northwards of it, upon the foreſaide chindle ſtrand, & about the Baye ſtand the houſes. In the ſouther Bay it is good lying, but the beſt read is betwixt the maine

Matkorf.

Ward-houſe.

land and the Iſland, about halfe wayes on the ſide of the Iſland againſt a Sandbay, and right againſt the Caſtle, there is good anchor-ground, in tenne or twelve fathom landlockt forr all winds, except for north and ſouth winds which blow there right through, yet men have ſome ſhelter of ſome poynt of the Iſland. Men may without feare come in there, betwixt the Iſland and the Manie, either from the ſouthwards or the northwards, it is all over cleane and cleare, but he that commeth in from the northwards, muſt runne ſomewhat nearer the Rock, where the gallowes ſtandeth upon, then the Iſland, becauſe thereabouts the Iſland is a little foule.

Roade Kilduyn.

About a ſhott of a Caſt peece northwards from the greateſt, lye the two ſmalleſt cloſe one to another, ſeeming a farre off to be one Iſland, are together not an Engliſh myle long, but high and rocky to ſee to, there lye alſo two or three rocks by them.

On this coaſt like as at the north-Cape a northeaſt & ſouthweſt moone maketh high water.

From Wardhouſe to the poynt of Kegor or the Fiſhers Iſland, the courſe is ſoutheaſt and ſoutheaſt and by ſouth ten leagues.

Betwixt them both is great bay, wherein are divers Sounds & rivers, amongſt other, the River Pitſing, which is a great faire and large River, where men may goe in with great ſhips, a good wayes within the river is good road, there is taken and laden much Sammon, but there fall no other ſpeciall wares. Southſouthweſt from the poynt off Kegor lye two Iſlands, to the ſouthwards of them men doe runne in to Monnickforde.

Keger or Fiſhers Iſland.

Kegor is a fayre haven, lying at the north end of the Fiſhers Iſland, a little without the poynt; There lye two or three rocks at the north poynt of the haven, and alſo a ſuncken rock in the middeſt of the havens mouth; you leave the ſuncken Rock, with the other Rocks on the ſtarboard ſide of you, and runne in by the ſouth ſhoare and edge then behinde the foreſayd rocks, and anchor there in ſeven or eight fathom, the havens mouth lyeth in ſouthweſt, it is there ſo good lying as in any havens thereabouts on the coaſt.

Eaſter-haven.

The Danes call this haven Eaſter-haven, there was wont to be the Staple of the Fiſh, where every one muſt come to buye: therefore the Iſland is yet called, whereon Kegor lyeth, the *Fiſhers* Iſland.

It is indeede no Iſland, but very neare: it is faſt to the maine land, with ſuch a very ſmall neck, that the Ruſſes, which come from Kilduyn, or the River of Kool, and are bound to the River Pitſing, doe goe alongſt within this land, & hawle their boates over that ſmall neck, for not to goe about a ſeaboard.

Laus.

From Kegor to Laus, the courſe is alongſt the ſhoare ſoutheaſt and by ſouth, ſomewhat eaſterly nine or ten leagues. This is right playne coaſt, without poynts or bayes, all alongſt by Laus to Tiepena, but the ſouth-poynt of Laus lyeth out a little, upon which ſtand two Warders, to the northwards of that poynt is the haven of Laus, a fayre ſand-bay, there is very eaſy lying for ſoutherly or eaſterly winds, but not for northerly winds, the winds betweene the northermoſt and northeaſt doe blowe there open in, and make therein a very great hollow ſea, men lye there in twelve, tenne and eight fathom, according as they runne farre in, the farther the ſhoaler, but all cleane riſing ſand-ground.

From Laus a little towards Kegor lyeth a little Iſland, behinde which is good anchooring for eaſterly winds, in cleane ſand-ground, but it is ſomewhat narrow.

From Laus to Tiepena, it is great half league, at the poynt lye ſome little rockes, but you cannot ſee them, before you be cloſe to them. Tiepena is a fayre haven, when you come from the northwards. you muſt runne ſo farre to the ſouthwards, alongſt by the ſhoare untill that you ſee open into it, and ſayle in amidſt the channell. When as you come from the ſouthwards, the haven openeth it ſelfe, being come in, you muſt edge up to the northwards, and anchor there, there you lye landlockt for all winds, there are no dangers which may hurt you, but it is over all cleare and cleane ſandy ground. Tiepena.

A little about the poynt, to the ſouthwards of Tiepena, which is on the ſouthweſt ſide of the *Fiſhers* Iſland is another faire haven, where men may goe to anchor, called Kowens.

From Laus to the *River* of Kola, the courſe is ſouth and by eaſt and ſouthſoutheaſt about tenne leagues. But Kilduyn and Laus lye ſoutheaſt and by ſouth, ſomewhat eaſterly and northweſt & by north, ſomewhat weſterly alſo tenne leagues aſunder. Kowens.

Of the Tydes and Courſes of the ſtreames.

At the North-Cape a *South*weſt moone maketh high water.

Thwart of the Tannebay a ſouthweſt moon maketh high water.

At Wardhouſe a ſouthweſt moone maketh high water.

On this coaſte like as at the North-Cape a northeaſt and ſouthweſt moone maketh high water.

Alongſt theſe coaſts of Lapland to the eaſtwards of North-cape, the flood commeth out of the northweſt and northnorthweſt, and ſo runneth alongſt the land unto Orlogenes.

Courſes and Diſtances.

From the North-cape to the North-kyne, eaſt and by ſouth 11 or 12 leagues.

From the North-kyne to the Tannebay eaſtſoutheaſt 10 or 11 leagues.

From the Tannebay or Matkorf to Wardhouſe, ſoutheaſt & by eaſt, ſoutheaſt and ſoutheaſt and by ſouth. 16 leagues.

From Wardhouſe to the poynt of Kegor ſoutheaſt and ſoutheaſt and by ſouth 10 leagues.

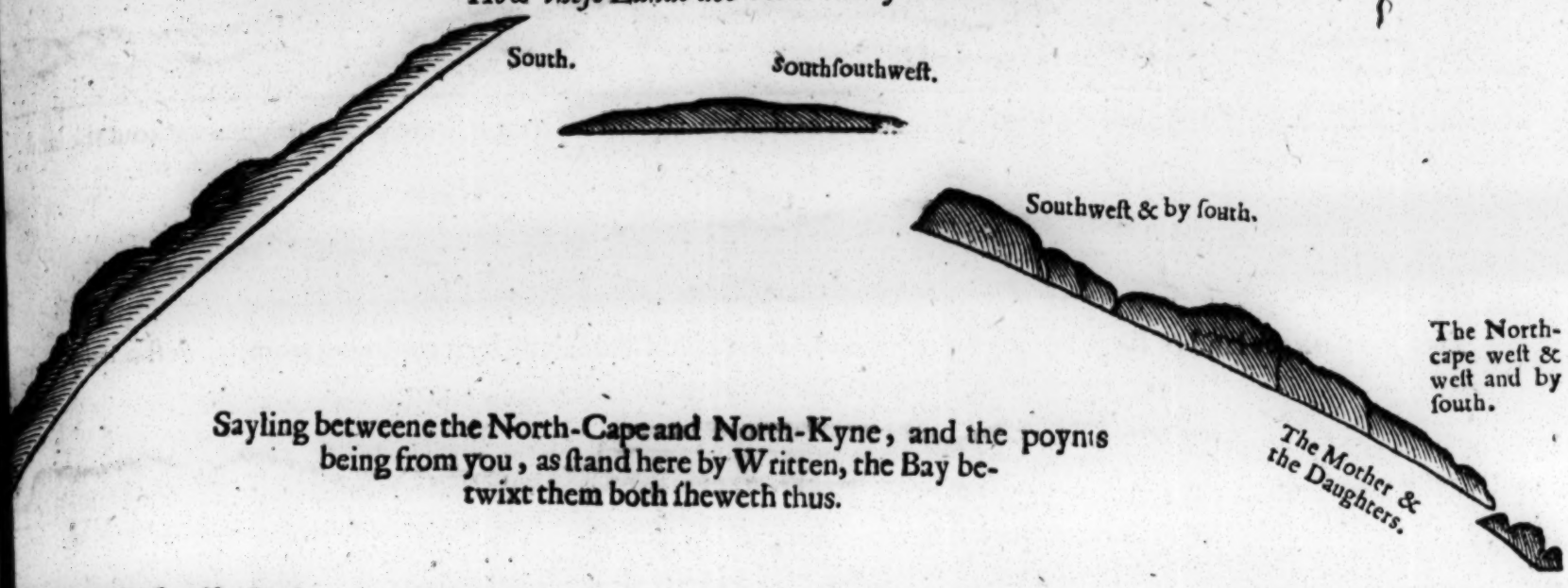
From Kegor to Laus ſoutheaſt and by ſouth eaſterly, 9 or 10 leagues.

From Laus to the River of Kool ſouth and by eaſt, and ſouthſoutheaſt 10 leagues.

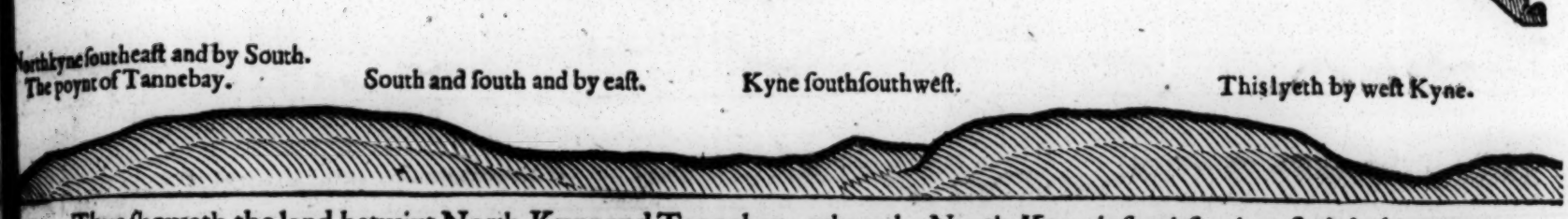
From Laus to Kilduyn, ſoutheaſt and by ſouth eaſterly 10 leagues.

How

How theſe Lands doe ſhew themſelves at Sea.



Sayling betweene the North-Cape and North-Kyne, and the poynts being from you, as ſtand here by Written, the Bay betwixt them both ſheweth thus.



Thus ſheweth the land betwixt North-Kyne and Tannebay, when the North-Kyne is ſouthſouthweſt eight leagues from you and the poynt of Tannebay, ſouth and by eaſt.



Thus ſheweth Kyne when the hill with the Croſſe is ſouthſouthweſt from you 2 leagues.



Thus appeareth the Mother.

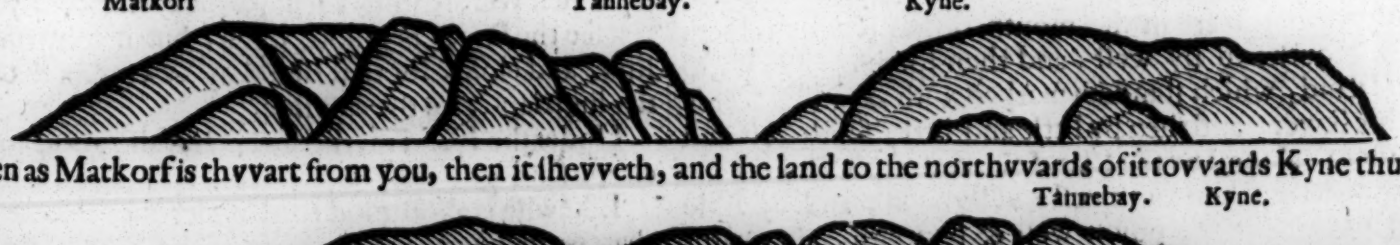
When this hill with the Croſſe is ſouth and by weſt from you 2 leagues, then ſheweth North-Kyne thus.



Thus ſheweth the land betwixt Kyne and Tannebay, when you ſayle alongſt by it ſeven or eight leagues without the land, Kyne being ſouthweſt and by weſt from you.



Thus ſheweth the Tannebay, when as you come off by Kyne, cloſe alongſt by the land, you may ſee theſe two poynts on againſt the high Innerland, the eaſt poynt ſhevveth it ſelfe, almoſt like Portland, the vveſt poynt ſhevveth it ſelfe firſt ſloping, but vvhen you come by little before the *Sound*, then it vvil be alſo ſteep.



When as Matkorf is thvvart from you, then it ſhevveth, and the land to the northvvards of it tovvards Kyne thus.



Thus is the land to the eaſtvvards of Tannebay, vvhen as you ſayle alongſt by it three leagues vvithout the land.



Thus ſhevveth the Iſland Wardhouſe, vvhen it lyeth ſouth from you three or foure leagues.



In this forme ſhevveth the Iſland Wardhouſe, & the land to the northvvards of it, vvhen it is ſ.ſ.w. a league & a halfe or 2 leag. from you.



Thus ſhevveth the land and the Iſland Wardhouſe being vveſtnorthvyeſt from you three or foure leagues.

Thus



Thus ſheweth the land of Kegor or the Fiſhers Iſland, when as you ſayle alongſt by it foure or five leagues without the land.



Thus ſheweth the land of Kegor or the Fiſhers Iſland, when as you ſayle along by it comming from the weſtwards.

Iſland Kilduyn.



Theſe three laſt figures belong one to the other by the Croſſes.



Poynt of the Fishers Iſland.



Thus ſheweth the Iſland Kilduyn, and the land to the northwards of it in the bay towards Fiſhers Iſland, when as you are betwixt them both ſeven or eight leagues from land, Kilduyn being about ſouth, or ſouthſouthweſt from you.

The fourth Demonſtration,

Where in,

Are deſcribed the Sea-Coaſtes of Lapland betweene the River of Kola and Iſlands of Swetenoes.

The River of Kool.

FOr to ſayle up into the River of Kool or Kola, you muſt goe from Laus, or the ſouth end of the Fiſhers Iſland towards the River ſouthſoutheaſt and ſouth and by eaſt, run about by the high land of Poden-wolck, and then the River ſhall open it ſelfe very wide. When you are by the poynt of Laus, you may ſee the Iſland Kilduyn, and the River of Koole, or the land by it: Betwixt Laus and the River of Koole, is alſo a great baye.

When as you are in the mouth of the River, it lyeth in firſt ſouth and by weſt, and then ſouthſouthweſt, to that Iſland, which ſtandeth marked with *A* in the Carde of this River, and then by little and little ſouthweſt and by ſouth, alongſt by the Iſland marked with *B* unto the Trayne Iſland then ſouthweſt and by weſt, and by little and little about the poynt weſt & by ſouth, afterwards in weſt, unto Divels poynt, over againſt it lyeth the White ſtone, which lyeth upon the land, thwart of it is good roade. From thence againe weſt and ſouth, weſtſouthweſt and ſouthſouthweſt unto Kool.

Road in the River.

When as you come into the River, and will ſeeke roade there, you muſt keepe alongſt by the weſt ſhoare, being ſomewhat within, you ſhall ſee a little Iſland lying cloſe by the ſhoare: from thence ſomewhat further about the high poynt is a Bight or Baye, and in that Bight a Sand-baye, where men may ſave a ſhippe without Anchor or Cable, that is a faire Sand-baye, where men may runne in all alongſt.

Alongſt by the north ſide it is five fathom deepe, and cleane ſand-ground, men runne in there betwixt the two poyntes, but there lyeth a black Rock in the narrow, betwixt both ſhoares, which they muſt leave lying on the ſtarboard ſide, within that rock it is three and two fathom deepe unto the ſtrand, within there is faire greene fields.

A little without the Baye lye two Iſlands, where of the outermoſt or eaſtermoſt is the ſmalleſt. When as in ſayling up alongſt the River, you may come by theſe two foreſayd little Iſlands about halfe wayes to the Iſland marked with *A*, there is alſo good roade, at the weſt ſhoare, you ſhall ſee upon the high Land three Warders called the three Kings, thwart of them is the roade. Roade three Kings.

When you are ſomewhat paſt the Iſland *A* you cannot ſee the River any more open, but it ſeemeth to bee ſhut, and cloſe, for that Iſland by *A* commeth then under high land, on the eaſt ſide.

Under the Iſland marked with *B* is alſo good road and cleane ſand-ground. Roade.

Likewiſe is alſo good road under the Trayne Iſland, that is reckoned for the halfe of the River, to wit off from the mouth of Kool.

When as you come now a little paſt the Trayne Iſland, where the *C* ſtandeth, then you ſhall ſee out a head a black blewe hill, called the Divels hill, it ſeemeth there, as if the *River* were cloſe and ſhut. It is beſt ſayling alongſt by the ſtarboard ſide, there you have moſt all ground cloſe by the land. There are many Bights, poynts, and Bayes, which are not all to be deſcribed. Divels hill.

On the other ſide men doe not come ſoo commonly, (except it be againſt their wills) there ſeeme alſo to bee many bayes and roades, and alſo ſome little Rivers. When as you come alongſt by the Divels hill, where the *D* ſtandeth, paſt the White ſtone, then you may ſee the Klinck-hill on the weſt ſide, and almoſt all alongſt unto Kool. When as you may ſee the Klinck-hill, there is ground by the weſt ſhoare for to anchor in, then there are on both ſides no dangers, but when as you come ſo far into the place, where the letter *E* ſtandeth marked, Klinck-hill.

't VASTE LANDT VAN LAPLANDT.

L A P L

Een Duytsche myl.

Een Spaensche myl.

Een Eng: of Fransch myl.

De Seven Eylan: den

De
Rivier van
KOLA
in 't groot besteck.

C

Dwervelsbergh

Witte steen

D

Een Duytsche myl.
Een Sweensche myl.
Een Eng. of Fransc. myl.

Clinckbergh

Rotbergh

Hoge

A N D T.

Rinde

Eylandt Dachie Oliuaz

Salensi-Daelen

Gabride

Marowie

Bay

Eylandt Rhijsfoot Oliuaz

Tierebieri

Eyl. Kildu

ked, there you muſt ſomewhat ſhunne the weſt ſhoare, becauſe of a little ſhoale which ſhooteth off from the ſhoare, and keepe in the middle of the channell, untill that you come againſt the Klinck-hill, there you muſt againe goe cloſe alongſt by it, in the middeſt of the fareway lyeth an Iſland of Rocks, which at high water is covered, where of you muſt take good heed.

From the Klinck-hill unto the Robben Iſland ſayle all alongſt by the weſt ſhoare, the Robben Iſland is alſo covered at high water, but when it is under water, then anchor thwart of the burnt trees. Thwart of the Robben Iſland lyeth a very great rock, as ſone as you are thwart of the high land, looke out carefully for it, keepe without it, or to the northwards of it, to witt a bow ſhot, there is the roade, there you may anchor by the ſhoare ſo ſhoale as you pleaſe, it is there good lying, and there you begin to ſee Kool alongſt by the houſe. Betwixt the Iſland Kilduyn and the River of Kola, ſomewhat nearer the River then the Iſland, lyeth a haven, called Bliesna Silenſi, that is to ſay, the next to Silenſi, there you ſayle in by a round reddiſh Hommock, being come within it, you muſt edge up to the weſtwards, ſo that the haven is altogether ſhut, and that you can ſee no ſea, you may anchor there ſo deepe or ſhoale as you will, it is there every where cleare and cleane white ſandy ground, and ſomewhat oazye and ſoft, there you may alſo without feare ſayle on againſt the ſhoare in the oaze, and ſo may ſave a ſhippe without anchor or cable.

The Iſland Kilduyn is about two leagues long, and one league broade, and lyeth weſtnorthweſt and eaſtſouthealt alongſt the land, like as alſoo the channell betwixt the Iſland and the maine land, which is at ſome places about a halfe league broade, and at ſome places, narrower, but all over very deepe and cleane. About the middeſt, yet neareſt the eaſt end, is a faire cloſe road, betwixt two poynts, that lye out towards the maine land, there men lye under the Iſland, cloſe to the ſhoare, before the Laps tents, under the eaſtermoſt poynt, which is a low playne poynt, in twelve, thirteene, or fourteene fathom, ſand-ground, more to the ſouthwards it is very deepe, you ſhall ſoone have fifty and ſixty fathom.

If you will goe to anchor under Kilduyn comming from the northwards or the weſtwards, then runne about by the weſt end, in betwixt Kilduyne & the maine land. When you are come ſomewhat within, you ſhall eſpy a little round Iſland, there the Channell beginneth to be narrow, yet it is broade enough for to turne to windwards through, ſayle forth towards the ſoutheaſt end, untill you come in betwixt thoſe two poynts, and run to the foreſayd low poynt, and anchor there within the bight, before the cabbens ſo neare to the land as you pleaſe, there you lye landlockt for all winds, as if you lay within a towne in a cloſe haven.

For to ſaile in from the eaſtwards, you muſt ſaile in to the weſtwards by the eaſt end, ſo long untill that you come by the foreſayd low poynt of the Iſland, then edge up about it to the northwards, and runne into the foreſayd bight, before the Cabbens, and anchor there in twelve, thirteene and fourteene fathom, that is the chiefeſt roade.

At the north and eaſt end of Kilduyn, betwixt the Iſland and the maine land, there is alſo a very good roade, in eight, tenne or twelve fathom, where men may lye ſheltered for all winds. Thereabouts is on the Iſland a good water place, there the water commeth running off from the high land, there men may goe lye by it, and fill their caskes lying in the boate.

You may alſo anchor under the maine land, betwixt the narrow, and the Roade of Kilduyn, at the place where the anchor ſtandeth marked, in the Carde. At the eaſt end of Kilduyn lyeth alſo a Fiſhers village, called Kammen, at a high poynt, which is called the Sacrifice poynt.

From the Iſland Kilduyn to the poynt Tiribiry, the courſe is ſoutheaſt and by eaſt about five leagues, betwixt them is a great Bay. In this Bay, a great league from Kilduyn lyeth a high Iſland called Bliesna Olinie, which is the next or the neareſt Olinie, behinde it, under the maine land, neareſt the ſouth end of the Island is a good road, where three or foure ſhips may lye very well. Bliesna Olinie.

There lyeth a round hill, or high Hommock upon the maine land, which ſheweth out above all the other hommockes, and is very eaſy to be knowne, upon which ſtandeth a high croſſe of two croſſes one above the other; ro the northwards of it lyeth a flat poynt, thwart of it lye ſome rocks alongſt the ſhoare, which at high water are covered.

At the ſouth end of the Iſland Olinie, a little from land, lyeth a rock almoſt even with the water, but you may alwayes ſee it well by the breaking of the water.

To the Northwards of the Iſland about an Engliſh myle, lyeth a rock not farre from land, and alſo to ſeawards from it a ſuncken rocke, which you cannot goe over at low water.

Hee that will (comming from the northwards) goe to anchor behinde Olinie, muſt runne a good wayes to the eaſtwards of this foreſayd rocke alongſt to the northwards of the Iſland, for to avoid the foreſaid rocke. Being come behinde the Iſland, you ſhall eſpy the foreſayd round hommock with the croſſe, you muſt not runne paſt the croſſe, but leave it on the larboard ſide, and ſayle in cloſe by it for to avoyd the foreſayd rockes, which lye of from the flat north poynt, the poynt with the croſſe is very cleane and ſo ſteepe, that you might lye with a ſhip on againſt the ſhoare without any hurt.

He that will come into this Road from the ſouthwards, let him run alongſt by the coaſte, which is very cleane, untill paſt the foreſayd poynt with the croſſe, and edge up cloſe about by it, as is beforeſayd.

Men doe anchor within the poynt in ſeven, ſixe, five, foure and three fathom, deepe or ſhoale as they will, there goeth no grown ſea at all.

About halfe wayes betwixt the Iſland Olinie and Tiribiry is another haven or great Bay, where men may lye landlockt for all winds. Tiribiry.

Tiribiray is a great River and of-water, where is a great Sammon fiſhing, there men may goe in with great ſhippes, and anchor every where within it where they will in good ſandy-ground, it lyeth in moſt ſouth, and afterwards more weſterly, the eaſtermoſt poynt lyeth out more to ſeawards then the other, ſo that it maketh a bay, where men ride under for a northweſt winde.

Two leagues to the ſouthwards of Tiribiry lyeth Waronia, which is a great ſand-bay or haven, which at the mouth is narrow, but within it is a broad Sound, there is alſo an of-water, where is a alſo much Sammon caught.

Within this bay it is every where good anchoring, ſhoale water and cleane ground.

Before the mouth of this haven lye three little Islands, behinde them it is alſo good road.

Two leagues or tvvo leagues and a halfe to the ſouthvvards of Waronia lyeth a Gabriele, a tyde haven, vvhich falleth dry vvithin, ſo that men may goe over there dry at lovv vvater, it flovveth there tvvelve foot up and dovvne, a ſouthſouthvveſt moone maketh high vvater on this coaſt. Gabriele.

In the mouth of this haven lye three Island, tvvo on the north ſide (vvhich are the lovveſt) and one on the ſouth ſide, that is the higheſt, you muſt runne neareſt the ſouthermoſt vvhen as you vvill ſayle in there: being come vvithin the Islands, you muſt edge up to the northvvards behinde the tvvo northermoſt Islands, and anchor there on the north ſide of the haven, there it is ſeven and eight fathom deepe cleane ground.

About a league to the ſouthwards of it lyeth Salenſi Daelna, that is to ſay, the fartheſt Salenſi; but betwixt them both a little to the northwards of Salenſi, lyeth yet a great in-draught which lyeth in at leaſt two leagues into the land, and is about ſo wyde as the River Tye before Daelna Silenſi.

Amſter-

Amſterdam, there may lye a great multitude of ſhippes, it is there broade and large enough, and all over good anchor ground.

A little to the northwards of this in-draught lieth a little Iſland, or rock, ſomewhat high, about which you may ſayle within, to wit, through betwixt theſe rockes and the land, but may make no road under them.

Daelna Silenſi. Salenſi Daelna is a great broad bay, before it lye three Iſlands, which are to ſee to gray of colour, as the maine land.

To the northwards of theſe Iſlands upon the poynt of the bay ſtandeth 3 great Wardes, and a little to the ſouthwards of the Iſlands, on the maine land lyeth a ſteepe hill, by which markes this bay is very eaſy to be knowne.

If you will ſayle into this bay comming from the northwards alongſt the ſhoare by the foreſayd great in-draught, a little to the northwards of this baye, you muſt looke out for theſe foreſayd great Warders, leave them on the ſtarboard ſide, and ſayle in cloſe by them, through betwixt that poynt and the Iſlands, firſt weſtſouthweſt, ſomewhat within, and then more ſoutherly, untill behind the Iſlands, and anchor there in five, ſix, or ſeven fathom: you may alſo ſayle further to the ſouthwards into the baye, ſo deepe as you will, there it is all over cleane.

When you come before the channell, it ſeemeth to bee very narrow, but is broad enough.

To the ſouthwards of theſe Iſlands is alſoo a channell which is very narrow, but yet for need you may ſayle out there. The ſouthermoſt Iſland, that is, whereupon the Fiſhermen dwell, is faſt to the northermoſt with a ſhoale, whereupon is at high water 10 or 11 foot water, but at low water you cannot goe over it.

Daelna Olinie. Two little leagues to the ſouthwards of Salenſi lyeth the Iſland Daelna Olinie, that is to ſay, the Furtheſt Olinie, it is an Iſland almoſt of *Faſhion* like Blieſna Olinie, at the north end high, at the ſouth end lower, and upon the end very ſteepe, it hath in the middeſt, (but ſome what neere the ſouth end then the north end) a low valley, where at high water the ſea doth almoſt run alongſt over it.

Behinde this Iſland, not under the Iſland, but under the maine lands, are good roades.

For to come in from the northwards behind this Iſland it is a broad, large, and very deepe Channell, without any dangers, but if you will ſayle in behinde it (from the ſouthwards) then you muſt runne in cloſe by the Iſland, for to avoyde a foule and ſtony riffe, which lyeth of from the maine land, halfe wayes to the Iſland, and ſo ſhoale that it falleth dry with the ſpring tydes at low water.

About halfe wayes the Iſland, neareſt the ſouth end, is a point, lying out from the maine land, towards the Iſland, to the northwards of it men doe anchor in 6, 7, or 8 fathom.

When you come in from the northwards, you may (ſo ſoone as you come within the points) luffe up towards cloſe about the point of the main land into a bay, and anchor there in eight, ſix, five or foure fathom, according as you ſayle far in, there it is very eaſy lying. In theſe roades under the maine land, it is all cleane and flat riſing ground, but under the Iſland it is deepe, and the ground riſing very ſteep, & therefore it is not good anchoring there.

Betwixt this Iſland Daelna Olinie, & Silenſi, lye 3 little black Iſlands, where is very eaſy road under them in 8, 7, and 6 fathom.

Rinde. From Daelna Olinie to Rinde are five leagues. Rinde is a very faire Haven, before it lie foure little Iſlands, where men may goe to anchor behinde them, behinde theſe Iſlands this Haven hath two bayes, upon the point betwixt them both ſtandeth a great Groſſe, the ſouthermoſt baye is farre the greateſt, into it commeth alſo a river or of water, where men doe catch *Sammon*. The middlemoſt Iſland (which is the northermoſt ſave one) is the greateſt and higheſt upon which ſtandeth a great Warder, the northermoſt is ſomewhat long and ſmall, and ſo low, that at high water the ſea runneth up a good wayes upon it on both ſides, and ſoo maketh that Iſland ſmaller.

Betwixt that Iſland and the maine land, or the north ſhoare of the Havens mouth lyeth a ſuncken rock, which you muſt leave, in comming in, on the larboard ſide, and runne in cloſe by the main land, this channel is ſo narrow, that you cannot ſayle in it, except you have a large wind, at low water there remaineth no more then 9 or 10 foot water.

To the ſouthwards of that great Iſland, lyeth another Iſland that is indifferent high, and the ſouthermoſt of them all, betwixt that and the point of the maine land, lyeth in the ſouther channell, which is broad and deep enough, but when you ſayle in there, you muſt run neareſt the land, for to avoid a ſuncken rock which lyeth at the foreſaid poynt of the maine land.

Theſe channells both from the ſouthwards and from the northwards lye in both alongſt the ſhoares, when as that you come then within the Iſlands you may anchor there all over where you will, there it is broad and large, and every where cleane & cleare. Men doe anchor commonly under the greateſt Iſland thwart of the great Warder, and alſo behinde the northermoſt Iſland in five, foure, or three fathom, there it is very eaſy lying, but with a ſoutheaſt winde, the ſea commeth a little rowling in, but there can goe no great ſea.

Farre within the ſouthermoſt bay, almoſt before the river, lyeth a rock, but above water. Without the greateſt and the ſouthermoſt Iſland, lyeth a little Iſland, or great rock, ſomewhat round, you may ſayle out and in betwixt the ſouthermoſt and the greateſt Iſland, alongſt to the n. wards of that little round Iſland, that is you muſt leave the ſouthermoſt Iſland with the outermoſt little round Iſland both on the ſtarboard ſide, and the greateſt Iſland with the Warder on the larboard ſide, when you ſayle out, this is a very narrow channell, but very cleane and cleare, ſo that there is nothing to bee avoyded, but onely a little ſuncken rock, which lyeth at the north end of the outermoſt little round Iſland, and falleth dry at low water, nevertheleſſe it is not good to uſe it, except it were for need that you could not doe better.

He that is bound into this haven, muſt run cloſe alongſt by the ſhoare for to get ſight of the foreſayd Iſlands, for by reaſon that the inner land is high, the Iſlands lye ſo under the land, that men can hardly ſee them, when they bee any thing farroff from the ſhoare.

A halfe league to the ſouthwards of Rinde is another great Bay, or haven, before it lye two little high Iſlands upon the northermoſt ſtandeth a great croſſe, you may ſayle in there about on both ſides of theſe little Iſlands, and alſo through betwixt them, and anchor where you will in fifteene, twelve, eight, or five fathom, deep or ſhoale, according as you ſaile farre in, & lie there ſheltred for all windes, but when the winde is hard out of the ſea, thwart upon the ſhoare, there will come in ſomewhat a rowling ſea, but there can goe no great ſea that can hurt you. A little to the northwards of this haven lyeth a low long Iſland cloſe to the ſhoare, whereby you may alſo know this coaſt, you may ſayle through betwixt this foreſayd Iſland & the maine land without any danger.

From this haven to the Seven Iſlands are foure great leagues. A little to the northwards of the end of the ſeven Iſlands, lyeth a faire great ſand-bay, where is alſo good anchoring for ſoutherly and ſoutheaſt windes, but not for eaſterly winds, with a northeaſt or ſea wind, it is bad lying there, for there is no ſhelter for them, men doe anchor there in twenty, fifteene or twelve fathom, according as they lye far or neare to the ſhoare. The Ruſſes call this Bay the Golden Bay, becauſe the ſtrand is of red ſand.

Golden Bay.

On all theſe foreſayd coaſts a ſouthweſt and northeaſt moone

moone maketh high water, like as on the former.

The Seven Iſlands lye all of them alongſt the ſhoare, the firſt or northermoſt is farre the greateſt of all, a high Iſland. The foure northermoſt follow cloſe one to the other, and lye about an Engliſh mile, or a ſhot of a caſt peece, a little more or leſſe of the land, ſo that men may ſayle there through betwixt. The fifth is a little round Iſland, and lyeth nearer to the land, there you cannot runne through within it, which is faſt to the land with a ſhoale of rocks, whereof ſome lye above, and ſome under water. The two ſouthermoſt lye a good wayes to the ſouthwards of the fifth: betwixt them & the maine land you may alſe ſayle through, you may alſo runne through in & out betwixt theſe ſame Iſlands every where, except betwixt the ſecond and third of from the northwards betwixt them both it is fowle.

Betwixt theſe Seven Iſlands and the maine land, goeth a ſtrong tyde, as well of flood, as of ebbe, where of men muſt be very carefull.

Betwixt the northermoſt and the maine land is a good road (thwart of the ſouth end of the Iſland) under the maine land, there is a faire ſand-bay, with an of-water, where is much Sammon to be caught, but it is not there uſed.

A little to the northwards of this Sand-bay lyeth a little Iſland betwixt the great Iſland and the coaſt, men doe anchor to the ſouthwards of that little Iſland, thwart of the ſand-bay in ſeven, ſix, five, or foure fathom, ſo ſhoale as they will, there is a very even ſand-ground, riſing ſo even as if it were planed.

Over againſt the fore ſayd bay men may make road under the ſouth poynt of the Iſland, thwart of a little bay, there they bring a hawſer on land, and an anchor to ſeawards in nine-tenne fathom, there they lye ſomewhat more out of the tyde then in the bay over againſt it.

Betwixt this great Iſland and the coaſt is about two third parts of the channell towards the maine land, flat riſing ground, and the other third part towards the Iſland Deep; the neerer the Iſland the deeper unto 18 and 19 fathom.

About halfe wayes betwixt that foreſayd little round Iſland, and the north poynt of the greateſt Iſland, ſtand on the maine land ſome little Lappiſh houſes, or a little village.

Betwixt the ſecond and third Iſland, or neareſt thwart of the ſecond, to tell from the northwards, lyeth yet a little village, thwart of it is a bay where men may anchor in tenne or twelve fathom all cleane ſand-ground, but with a ſouth wind there commeth in a rowling Sea, but with northerly winds it is very good lying there.

Thwart of the fourth Iſland on the mayne land, is alſo a ſand-bay, where is alſo good road in ſeven or eight fathom for a northweſt or north wind, but with an eaſt winde it is there bad lying, that bloweth there in open through betwixt the fourth and fifth Iſland.

Even at the end of the Seven Iſlands is a great Indraught, or bay, which the Ruſſes call the Shipper, which is narrow at the comming in, but within indifferent large & wide: within it is good road in twelve, eight & foure fathom clean riſing ground, but with a northeaſt wind it is bat lying there, that bloweth thete flat in.

About nine leagues to the ſouthwards of the Seven Iſlands, lyeth a poynt called *Siornenos*, that is to ſay, Blackpoynt, it is ſo called, becauſe it is very black to ſee to, there within it the land is high, and goeth downwards low towards this poynt almoſt as *Swetenoes*.

At this poynt the land beginneth to alter in forme, to the northwards of it the coaſt is altogether high, but to the ſouthwards of it all low and even land, ſo that thereby you may know (when you ſayle alongſt this coaſt) whether you be to the northward or to the ſouthwards of this black point.

A little to the northward of this poynt lyeth a high and great Iſland a halfe league long, which the Ruſſes call Noock Oſtrove, which is the Nayle Iſland, behinde it is very good roade, you muſt run in there from the ſouthwards; from the northwards, you cannot come in there behind it. Noock Oſtrove.

The north end is faſt to the maine land with a bancke or ſtrake of ſand, which lyeth moſt part above water, you may ſayle in there ſo farre behinde it as you will, and anchor in ten, eight, ſix or foure fathom, the further that you ſayle in, the ſhoaler it is, it is very good lying there, and ſheltered for all winds.

From the Siornenos, or the black poynt to Evanekriſt, it is ſouthſoutheaſt foure leagues, that is a point with many croſſes, under it you may make good roade for ſouther-ly winds. Evanekriſt.

From Evanekriſt to Kletna are yet three or foure leagues, this is a poynt whereupon ſtand alſo many croſſes, it lyeth out a little, but not ſo much as Evanekriſt, there you may have alſo road for ſoutherly winds, but not for ſeawards. Kletna.

From this poynt to the Iſlands of *Swetenoes* or Jockena, it is two leagues. Iſland of Jockena.

Of the Tydes and Courſes of the ſtreames, about theſe foreſayd places.

At Kilduyn an eaſt ſoutheaſt moone maketh the higheſt water.

At Seven Iſlands a ſoutheaſt moon maketh higheſt.

At *Swetenoes* a ſouth and north Moone maketh high water.

Alongſt the coaſtes to the eaſt wards of the North-cape, the floods come out of the northweſt and northnorthweſt, and run ſo alongſt the coaſt of Lapland, unto Orlogonoſe.

How theſe lands doe lye one from the other and from other lands.

From Kilduyn to the poynt of Tierrebirry ſoutheaſt and by eaſt 5 leagues.

From the poynt Tierrebirry to the *Seven*-Iſlands, ſoutheaſt & by ſouth 18 leagues.

From Tierrebirry to *Swetenoes*, the coaſt lyeth ſoutheaſt & by ſouth 40 leagues.

Heights.

The land Kilduyn lyeth in 69 degrees & 40 minutes.

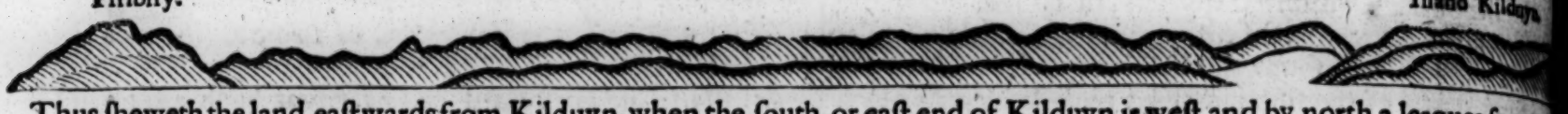
How theſe Lands doe ſhew themſelves at ſea.



In this forme ſheweth Kilduyn, when the ſteepe poynt lyeth ſouth and by eaſt, and the River of Kool ſouthſouthweſt about five leagues from you, and the land to the weſtwards of Kilduyn is very hilly, and the river doth ſhew it ſelfe very wide open as here ſtandeth pourtrayed.



Thus ſheweth the Iſland of Kilduyn, when the w. poynt lyeth ſ. w. and by ſ. and the eaſt poynt ſouth and by weſt, ſomewhat weſterly from you, the river of Cool lieth then ſ. w. & by w. from you, the maine land that you may ſe to the eaſtwards lieth then ſ. e. and by ſouth, ſomewhat ſoutherly from you: the land of Laus you may then yet alſo ſee in the n. w.



Thus ſheweth the land eaſtwards from Kilduyn, when the ſouth, or eaſt end of Kilduyn is weſt and by north 3 leagues from you



The Iſland of Kilduyn and Tiribiry ſhew thus, when as you ſayle alongſt by them foure leagues from land, about halfe wayes betwixt both, neareſt to Tiribiry, as is pourtrayed in theſe two figures here above, the A A one to the other.



In this forme ſheweth the land of Tiribiry, when you ſayle alongſt by it, being 4 or 5 leagues from it, and eleven or twelve leagues from Kilduyn.

The fifth Demonſtration,

In which are ſet forth

The Sea-Coaſtes of the Mouth of the White Sea.

THe Iſlands of Swetenoes or Jockena, there are ſix in number, where of the five lye alongſt the ſhoare about the ſpace of two leagues, the ſixth lyeth within the other, thwart of the ſouthermoſt of the five. The three northermoſt lye one by the other as alſo the 2 ſouthermoſt parted aſunder from the other three, the northermoſt of all theſe Iſlands of Jockena lyeth from the poynt of Swetenoes due weſt three leagues, behinde it is good roade thwart of the ſouth end in five or ſix fathom. The poynt of Swetenoes is a flat poynt lying out, to the weſtwards of it, at the end of thoſe foreſayd Iſlands, goeth in the river of Jockena, where is a great Sammon-fiſhing. When you are by Swetenoes you can ſee little perfecteneſſe of theſe Iſlands, becauſe the maine land is much higher then the Iſlands.

Iſlands of Swetenoes. Jockena.

Swetenoes.

He that commeth from the northwards, and is bound in to Jockena, muſt runne cloſe alongſt by the ſhoare, for to get ſight of theſe Iſlands. Through foure ſeverall wayes you may ſayle through theſe Iſland into the river of Jockena: Firſt comming from the northwards, you may ſayle alongſt by the ſhoare, through betwixt the ſhoare and the Iſlands, (which you leave then all on the larboard ſide) into the river.

For to ſail into the River off Jockena.

The ſecond paſſe lyeth in through betwixt the three northermoſt, and the two ſouthermoſt Iſlands, that is broad, wide and deepe, and alſo the beſt channell off all, it lyeth ſouthweſt, and ſouthweſt and by weſt from the poynt of Swetenoes, and lyeth in moſt ſouth, when you ſaile in there, you muſt runne neareſt the ſouthermoſt Iſland, becauſe of a ſuncken rock which lyeth in this channell ſomewhat of from the third Iſland, at high water you may run over it, but not at low water.

Being come within theſe Iſlands, you ſhall ſee the ſixth Iſland, which lyeth within the two ſouthermoſt, you muſt run about by it, leaving it on the larboard ſide; When as you are then a little paſt that innermoſt Iſland, you come againſt the high poynt, and ſayle in alongſt amidſt the channell, betwixt both lands, there it is ſhoale water, to wit, five, foure, three, to two fathom and a halfe, but you may ſayle in amidſt the channell without feare, all alongſt unto the Lappiſh-houſes, where the Sammon-fiſhing is, & anchor there alſo in the middeſt of the river, thereabouts lye ſome ſuncken rocks, which at low water are uncovered, where of you muſt take heed.

For to have the right knowledge of this channell, you muſt looke out for the high poynt, which lyeth at the weſt poynt of the river, within the Iſlands, when that is behinde the fourth Iſland (to reckon off from the northwards) and the poynt of Swetenoes is northeaſt, and northeaſt and by eaſt from you, then you are right open before the foreſayd channell.

Betwixt the two ſouthermoſt Iſlands goeth alſo an indifferent wide channell through, where men can ſayle in, and ſo come on againſt the Innermoſt Iſland, which you may ſayle about on both ſides.

Betwixt the Iſlands and the maine land you may alſo ſayle through, but that is a very narrow channell, men ſayle through it, as if they ſayled in alongſt a ditch betwixt two Dykes.

For need, or if it were in extremity, you might alſo ſayle through at high water betwixt the northermoſt Iſland, and the ſecond, and likewiſe alſo betwixt the ſecond and the third, but if you can by any means doe better, it is not good to doe it.

Men

Pascaarte
van de Mont van de
WITTE ZEE,
tot aende Riuier Dwina al: Archan:
gel toe.

De Eylanden van LOM:
BASCHO na't leven
ontworpen

R V S S E N

Catsnoes

Den Blauwen
ofte Graauwen hoeck

Pelitza

Kerretsnes

Musmo

Monies

I. Sowjatoi
Cruys Eyl:

C. Pentecoste

C. Bona for:
tuna

Mezeensche
Golfe

Lampas

Duytsche mylen 15 in een Graat

Spaensche mylen 17 ½ in een Graat

Eng. Fry mylen 20 in een Graat

Hier leggen blinde vaeplen die met lage water bouen comen

Hier soutmen Salm

Iockena

Rivier van Iockena

SWETENOES. met de Eylandekens daer ontrent gelegen nae 't leven ontworpen

Swetenoes

d' Eylanden van Swetenoes

d' Eylanden van Swetenoes

Iockena

R. van Iockena

Swetenoes

R. Pondy

De drie Eylanden

C. Orlogones

Lombascho

d' Eylanden van Lombascho

Colcora

Carana

A N D T .

Men may anchor at divers places within theſe Iſlands. Betwixt the two ſouthermoſt Iſlands, and the innermoſt Iſland, you may have roade, where you may lye ſheltred for all winds, and ſafe from Yce-drifts out of the ſea. Within the innermoſt Iſland you muſt alſo anchor over againſt it ſomewhat furter in againſt the ſteepe poynt. At the rivers mouth, on the weſt ſhoare is a bay where you may ſayle in, and anchor ſo neare to the ſhoare as you will, in ſix, five, foure and three fathom ſoft ſticking grouud, there you lye ſafe from Yce-drifts. You may alſo anchor on the eaſt ſide, right before the ſteepe poynt, but there you lye not ſafe for yce that commeth out of the river. The tyde here alongſt theſe Iſlands, agreeth neere with the tyde of Swetenoes, it floweth with Spring tydes neare two fathom and a halfe up and downe.

Behind the poynt of Swetenoes you may run into the bay, and anchor there for a north, northeaſt and eaſt winde, there is cleane ground.

Lombaſcho. From Swetenoes to Lombaſcho, the coaſt lyeth ſouth-ſoutheaſt thirteene leagues. Under Lombaſcho men may alſo goe to anchor, but it is not there very good lying, eſpecially with great ſhippes; the ground there is not cleane, and when the wind is out of the Sea, commeth in there rowling very much. The lying of this road ſtandeth drawne out at large in the Card, with the depth ſet downe as it is at high water and neepe tydes: the water falleth and floweth there at leaſt two fathom up and downe, & at Spring-tydes little leſſe then three fathom, or two fathom and an halfe.

Within the poynt, or in the bight of Lombaſcho you may not anchor, there remaineth not above three foot water, and the ground is ſtony and foule.

To the northwards of Lombaſcho lye five Iſlands lying alongſt the coaſt allmoſt halfe wayes to Swetenoes.

Three leagues to the ſouthwards of Lombaſcho, lyeth a black ſteep poynt, untill that the coaſt lyeth of from Tombaſcho alſo ſouthſoutheaſt, but from that poynt to Orlogenes, the courſe is ſouth 9 leagues, betwixt them there is no place where men may anchor, but all alongſt a whole coaſt, cleane and ſteepe.

Orlogenes.

From the poynt of Orlogenes lyeth off a ſtone-riffe a ſhot off a caſt peece into Sea, which falleth dry a great wayes at low water, whereof men muſt take very good heed.

From Orlogenes to the river Ponnoye, it is ſix leagues: betwixt them lye the three Iſlands. Firſt from Orlogenes to the two firſt Iſlands, the courſe is ſouth three leagues, & from thence to Ponnoye ſouthweſt & by ſouth 3 leag.

Three Iſlands

A halfe league to the northwards off Ponnoye lyeth the third of the three Iſlands, ſo that the two and the third lye about two leagues aſunder.

Theſe Iſlands are much lower then the maine land, ſo that they can hardly be ſeene or not at all, except you be by the ſhoare, thwart of them you may come neere the ſhoare in ſeven fathom without danger.

Thwart of theſe three Iſlands, and Ponnoy, the mouth off the white ſea is at the narroweſt.

About foure leagues thwart off to ſeawards from the three Iſlands in the middeſt of the mouth lyeth a ſhoale, whick is very uneven and ſtony, and at ſome places with low water commeth dry above water, it lyeth ſouth and north, firſt north alongſt the coaſt, at leaſt north and by weſt untill thwart of Lombaſcho, but there alongſt it is deepe enough, fifteen and ſixteen fathom. About ſoutheaſt from Ponnoy it is at the ſhoaleſt ſeven fathom deep. You may alſo ſaile alongſt to the eaſtwards of this ſhoale into the white Sea, but there it is ſhoale water, uneven & very ſhoale. The right fareway is alongſt to the weſtwards of it, and five and twenty fathom deep.

Ponnoy is a River where at low water remaineth no more then ten foot water, it floweth there with a ſpring-tyde three fathom up and downe, and with an ordinary tyde 15 foot.

From the three Iſlands to the Iſland Soutſnowits: which men doe call the croſſe Iſland, the courſe is ſouthweſt & by ſouth, or as ſome doe hold ſouthweſt ten leagues, or from Ponnoy nine leagues. All alongſt this coaſt men may anchor every where in eight or nine fathom, and with contrary winds ſtop the tydes, there goe ſtrong tydes eſpecially in the ſpring of the yeare with an Ebb.

Between the three Iſlands and the croſſe Iſland lyeth a poynt, upon which ſtand alſo three croſſes, one by the other, which men doe miſtake oftentimes for the croſſe Iſland, but it is much ſmaller to ſee to. When you doe get ſight of that poynt, there ſheweth by it, as if there lay a ſhippe before the land with the topmaſt-ſtricke. The right croſſe Iſland hath upon the north end two Croſſes, and upon the ſouth end three, by all theſe markes they are eaſy to bee knowne one from th other.

Behind the Croſſe Iſland you may have road in 6 or 7 fathom, you may ſayl in behind it, as well from the northwards as from the ſouthwards, it is there cleane & cleare every where, men doe anchor, when as the great croſſe doth ſtand from them e. n. e. there is the right road.

Southeaſt and by ſouth from the three Iſlands, and Ponnoy on the Ruſſe ſide, there goeth in the Meſeens golfe, into which commeth a great River, where men may go up to Kilda, and Kolmogro, and alſo another, upon which the Town Slowoda lyeth.

Southeaſt from Ponnoy lyeth a little Iſland in the mouth of the Meſeens golf, where you may have road under for weſterly and ſouthweſt winds.

The ſouth poynt of this golf is a low ſand-ſtrand, all grown with trees, there you may alſo anchor alongſt by the ſhoare, but cloſe by the land; if you lye ſomewhat of from the ſhoare in 9 fathom, there the ground is foule, from thence alongſt the ſhoare to the Blew poynt, it is all faire ſtrand ground.

From the Croſſe Iſland, to the blew or Gray point, the courſe is ſouthweſt twenty leagues. In this fareway in the mouth of the White-ſea, there goe ſometimes very ſtrong currents, eſpecially in the ſpring, through the terrible great freſhuts, of the melting of the ſnow, which falleth ſtrom both ſides into the White-ſea, and runneth through this ſtrait into the ſea, with great whirling & terrible riplings: It happeneth ſometimes that the current runneth there ſo terrible ſtrong, to the w. wards into the ſea, that with a reaſonable gale & full ſayls, men can doe no more but ſtem the tide, where of men muſt be mindfull.

Current in the mouth of the white ſea.

Under the Gray poynt men may anchor on the ſouth ſide in tenne, eight, or ſeven fathom, there it is good lying for eaſterly windes, a northeaſt winde commeth from the poynt, the ground is there reaſonable good, but not the cleaneſt.

Gray-poynt.

From the Gray poynt eaſtwards to the Meſeens Golf the coaſt is all faire ſand-ſtrand, with ſome bancks of two fathom and an halfe, and three fathom along the ſhoare, not farre without the land, where ſometimes the current falleth over with great riplings.

From the blew poynt to the river of Arch-Angell, the courſe is ſouth and by weſt fourteen leagues. When as you ſayle ſo towards the rivers, you ſhall then firſt eſpy the land a good wayes to the weſtwards of S. Nicholas, it arriſeth in a long ſtrake, and then there riſeth more land towards the River, as if it were a round Iſland, afterwards you ſhall ſee the ſteeple of S. Nicholas, when that ſtandeth ſouth and by weſt & ſouthſouthweſt from you; then you are open before the mouth of the river of Arch-Angell.

Cande-noes.

The cape of Candenoes and Orlogenes lye northeaſt & ſouthweſt 7 and ſixty leagues aſunder. The poynt off Candenoes is very eaſy to bee knowne, there ſtand five great croſſes upon it for markes. When as you fall with it, you may very well perceive, that the land falleth away, on the one ſide to the ſouthweſt, towards the White ſea, and ſoutheaſt on the other ſide.

Morſo-nowits.

About thirteen leagues to the eaſtwards of the cape de Candenoes lyeth an Iſland, called Morſonowits, to the eaſtwards of it goeth a great Baye into the land, but it is very ſhoale water, with many ſhoales and Dwale-grounds. It hath here to fore happened, that ſome

ſhips have beene here loſt, thincking that they runne into the mouth of the White Sea, for it agreeth very neare with the courſe, and alſo with the height of the White Sea, but it is eaſy to bee know by the land, and to diſcerne one from the other, for the Ruſſe coaſt to the eaſtwards of Candenoes is altogether a land with Sand-hills, and a flat ſtrand, but the coaſt of Lapland ls high and hilly. In this Bay goeth a River through the land, where you can come through with Lodges into the White *Sea*.

Calgoya. Thwart of this Baye, about ſixe and twenty leagues eaſt, and eaſt and by ſouth from Candenoes lyeth the Iſland of Calgoya, being thirteene leagues long, you may ſayle round about it, but upon the ſouth ſide runneth a great riffe alongſt the land: they that come from the eaſtwards muſt avoyd it, for it is faſt to the weſt end off the Iſland. Upon this Iſland are great ſtore of Geeſe, which in the Sommer are altogether bare, or naked, without any feathers, which ſit and broad upon one egge, which they havelying under them, and ſo doe hatch their young one which are there in ſuch aboundance, that the Ruſſes doe come there a ſhoare with their Lodges, & lay a deele or boarde upon the land, and drive the Geeſe with ſtaves into their boats or Lodges, in ſuch aboundance that they ſalt them into Barrels, in great aboundance.

Tuſſara. From Candenoes to the Iſland Tuſſara, it is eaſtſouth-eaſt two and forty leagues, betwixt them both goeth in the foreſayd Baye. By weſt Tuſſara lyeth the point of Swelgenoes.

Swelgenoes. Colcova. From Tuſſara to the River of Colcova, the courſe is eaſt ſeven leagues, which is a good River. being twelve foot deepe, but there is no other trade, but that the Ruſſes doe come there from Colmogro and S. Nicholas with Lodges, for to trade there, & to barter their wares there for Skins and other wares.

Pitſana. Seven leagues to the eaſtwards off the River of Colcova, lyeth the River of Pitſana, there is but ſix foot water, and is an unknowne place, but a little to the weſtwards of it lyeth a ſhoale, which you muſt avoyd: Oliver Bruneel in his voyage from Nova Zembla come on ground there.

Pitſora About thirteene leagues to the eaſtwards of Pitſana lyeth the river of Pitſora, which lyeth in ſouthſoutheaſt by the eaſt poynt, and hath twelve foot water, the land is there low with Sand-hills, & upon the weſt ſide ſtandeth a Pack-houſe with ſome croſſes. When you come within the River, you muſt edge up weſtwards towards the Pack-houſe, and anchor there in three or foure fathom, there is a great Haff, or broad water. You muſt avoyd the eaſt ſide of the River, which is full of Sands & bancks. The little towne of Pitſora lyeth about five and thirty leagues within the land, there is great aboundance of coſtly *S*kinnes and Chriſtall.

Oltgyn Betwixt Pitſora and Waygats lyeth Oltgyn, & without the Land lye two rocks or little Iſlands, the one called Orangien, and the other Grave Maurice, you may anchor under them in ſix or ſeven fathom. From the ſouthermoſt ſhooteth of a little riffe, but you may ſound it wel in three fathom.

To the eaſtwards and to the weſtwards of theſe two little Iſlands is a great Bay, where it is ſhoale water, the land runneth there round to the point of Pitſora, al alongſt in a Bay of from Pitſora unto the Waygats. It is from Pitſora to Waygats northeaſt and by eaſt 38 or 40 leagues.

Waygats. Waygats, which is alſo called the Straite of Naſſowe, is a Straite where men may ſayle through into the Tartariſh Sea, it lyeth in firſt about e. afterwards northeaſt through about eight or nine leagues, about halfe wayes through lyeth an Iſland, which you may ſayle about on both ſides. A little within the point, on the north ſide is a faire Baye, which you may ſayle into ſo deepe as you will, in five, foure and three frathom, good ſticking ground, alongſt by the eaſt ſhoare is the deepeſt water, there you ſhall lye ſheltered for all windes and Ice-drifts.

Trayne-bay. Through this narrow or Strait, hath beene divers time attempted, or under taken, for to diſcover, & to finde a way, for to paſſe alongſt to the northwards of Tartaria, unto the rich Kingdomes of Cathay & China, & ſo forth to the Molucques, but in vaine becauſe of the terrible Ice that remaineth there the whole yeare through, & can never melt, by reaſon of the continuall cold.

From the eaſt end of the Straite Waygats to Baye of Oby it is eaſtſoutheaſt, & ſoutheaſt & by e. forty leagues. Oby. To the eaſtwards of it that land lyeth forth northeaſt forty leagues more, to the two rivers, and then yet ſo forth alongſt northeaſt but how far is yet unknowne.

Nova Zembla. The weſt coaſt of Nova Zembla lyeth to the northwards of from Waygats to Coſtintſarck northnorthweſt about three & fifty leagues. To the northwards of it the land falleth away, about north and by eaſt to the poynt of Langenes, or the *S*tates point, further northnortheaſt, northeaſt and eaſtnortheaſt to the Iſland of Orangien, the northermoſt part of Nova Zembla, in the height of 77 degrees and an halfe.

Of the Tydes and Courſes of the ſtreames, about theſe foreſayd places.

At *S*wetenoes a ſ. and n. Moone maketh high water.

Alongſt the coaſtes to the eaſtwards of the North cape, the floods come out of the northweſt & northnorthweſt, & run ſo alongſt the coaſts of Lapland, unto Orlogonoſe.

At the three Iſlands a ſouthweſt and northeaſt moon maketh high water.

At Katſnoſe poynt an eaſt and weſt moon maketh the higheſt water.

Before Podeſſemſke and S. Nicholas an eaſt & by ſ. and weſt and by north moon maketh the higheſt water.

At the Iſland of Nova *Z*embla a ſoutheaſt moone maketh high water.

From Orlogenes & the three Iſlands, the flood falleth into the mouth of the White Sea, towards the graye poynt of Catſnoſe about ſ. ſ. w. & ſouthweſt & by weſt.

But about the poynt of Catſnoſe, the flood falleth into the White Sea, partly towards Warſiga and Ombay, and alſo towards the Podeſſemſke and *S*. Nicholas.

To the eaſtwards of Candenoes, towards the Iſland of Colgoyen, the flood falleth eaſt and by ſouth, as alſo alongſt the ſame Iſland, & from Colgoyen towards the Waygats, the tyde falleth eaſt and weſt. Alongſt Nova *Z*embla, the tydes turne about with the moone alongſt Ruſland, they come out of the weſt and weſtnorthweſt, betwixt Candenoes & Pitſora, & fall ſo alongſt Ruſland.

The floods towards Waygats come frome Colgoyen and Nova *Z*embla, and fall togethet eaſt and by north through the *S*traite of Waygats, towards the River of Obye, ſo that the ebs and floods doe keep open the channell of Waygats, that they are oftentimes without Ice, or at leaſt but with Ice that drives in ſhoales.

But to the eaſtwards of the Waygats, the floods come out of the northeaſt, and fall ſo into the Oby, and into the Strayt of Naſſowe, there the water riſeth and falleth, but keepeth no certaine tyde.

Of the depths and grounds both to the eaſtwards and weſtwards of Waygats.

All the coaſt alongſt of from Candenoes unto Waygats, men doe finde a flat riſing ground, the moſt part ſand and ſoft ground, he that muſt ſayle there in miſty weather, muſt know that in 8 or 9 fathom depth, he is 4 or 5 leagues from the coaſt, but when it is 30, 35 or 40 fathom, then he is farre enough from the land. So it is alongſt Nova Zembla, & alſo over the eaſt ſide of Waygats, but when you come before the *S*trait, it will be ſhoalter by little and little.

How theſe lands doe lye one from the other, and from other lands.

From *S*wetenoes untill 3 leagues paſt Lombaſcho ſouthſoutheaſt.	16 leagues.
From thence to Orlogenes ſouth	9 leagues.
From Orlogenes to the 3 Iſlands ſouth	3 leagues.

From

5 10 15 18

Duytſche mylen 15 in een graet

5 10 15 20

Spaenſche mylen 17 1/2 in een graet

5 10 15 20 22

Eng:en Fra: mylen 20 in een graet

Het Rheen of de Wolven Eylandt

Hoeck Touria

Sout Kete

Touria babbe

Soute Rivier

Soete Rivier

Ombay

Vobra Ostrove

Kandalox

Kemeloe

Koroda

Verſche Rivier

Soute Rivier

Verſche Rivier

Kielit

Pas caarte
vañ
WITTE-ZEE
begrypende de cuſten van Laplandt, van
Warſiga tot aen Kandalox en de
cuſt van Corelia tot aen de
Riviere Dwina

Caerte van ARCHANGEL ofte de Rivier de Duina, soo wel van't Nieuwe als't Oude diep.

Vaert naer Colmogro

Archangel ofte S. Michiel

Sameyoden. Eyl.

Solnebal

Duina Riu.

Samoyoden huys

Cruys Eylandt

De groote hoeken

Eylanden

De

van

Duytſche mylen 15 in een graet

Spaenſche mylen 17½ in een graet

Eng: en Fra: mylen 20 in een graet

Steene Bank

Binnen boſch

Wacht huys

S. Niclaas

Podeſemske

Droogh met loogh water

't Loots huys

't Voet

S. Niclaas dijck

't Berghuis



From the three Iſlands to Ponnoy, ſouthweſt & by ſouth, 3 leagues.
From the three Iſlands to the Croſſe-Iſland Souſnowits ſouthweſt, and ſoutheſt and by ſouth 10 leagues.
From the Croſſe-Iſland to Catſnoſe, or the gray poynt ſouthweſt 20 leagues.
From the Gray poynt to the River of Arch-Angel ſouth and by weſt 14 leagues.
From the Croſſe-Iſland to Warſiga weſtſouthweſt, and weſt and by ſouth 24 leagues.
From Orlogenes to the cape de Candenoes, the courſe is northeaſt 47 leagues.
From Candenoes to the Iſland Colgoye eaſt and by ſouth 26 leagues.
From Candenoes to Swelgenoes ſ. e. & by e. 29 leagues.
From Candenoes to the Iſland Morſonowits ſ. e. 13 leag.
From Candenoes to Tuſſara it is eaſtſoutheaſt 7 leag.
From Colcova to Pitſana eaſt and by north 7 leagues.
From Pitſana to Pitſora e. and eaſt and by north 13 leag.
From Pitſora to Waygats, the courſe is about northeaſt and by eaſt 38 or 40 leagues.
From Catſnoſe to the Iſlands of Solofky weſt or ſomewhat more ſoutherly 37 leagues.
From Candenoes to Coſtintſarck in Nova Zembla n. e. and by eaſt about 83 leagues.
From the eaſt end of Colgoyen to Waygats e. 80 leag.
From Pitſora to the eaſt end of Colgoyen w. n. w. 43 l.

Heights.

The poynt of Catſnoſe or the Graye poynt lyeth in 65 degrees.
S. Nicholas or the River of Archangell in 64 degrees, 30 minutes.
Cape Candenoes 69 degrees, 30 minutes.
The Iſland Colgoya in 69 degrees, 10 minutes.
The River of Colgoya, Pitſana, and Pitſora lye in 68 degrees, 30 minutes.
Waygats or the *Straite* of Naſſow lyeth in 69 degrees 43 minutes.

How theſe Lands doe ſhew themſelves at ſea.



Thus ſheweth the land betwixt *Swetenoes* and Orlogenes, as you ſayl alongſt by it.

The ſixth Demonſtration,

Where in,

Are ſet forth the Sea-Coaſtes of the whole White Sea.

FRom the blew poynt to the river of Arch-Angell, the courſe is ſouth and by weſt thirteene leagues. When as you ſayle ſo towards the rivers, you ſhall then firſt eſpy the land a good wayes to the weſtwards of S. Nicholas, it ariſeth in a long ſtrake, and then there riſeth more land towards the River, as if it where a round Iſland, afterwards you ſhall ſee the ſteeple of S. Nicholas, when that ſtandeth ſouth and by weſt, and ſouthſouthweſt from you, then you are open before the mouth of the River of Arch-Angell.

For to ſail into the river of Arch-Angell.

If you wil ſayle in there, then bring the ſteeple of S. Nicholas a ſhippes length and a halfe, or two ſhippes lengths to the eaſtwards of the Croſſe ſand-hill, keepe them ſo ſtanding, and ſayle right with them, un till that the wood within, come midwayes in the middlemoſt Podeſſemſke, goe on then ſouthweſt and by ſouth, and ſouthweſt, ſo to faile a weather of the taile or ſhoale, which ſhooteth of from the eaſt ſhoare, when as then the wood within (that is, the wood upon the northeaſt poynt of the River) commeth to the ſouthermoſt of the two woods, which ſtand upon the middlemoſt Iſland or the Poedeſſemſke, then you are in the mouth of the channell, right upon the ſhoaleſt of the Barre, the markes of the eaſt tayle are, when the wood commeth halfe wayes betwixt the ſouthermoſt and the middlemoſt Podeſſemſke: when the poynt of the ſouthermoſt Podeſſemſke is ſ. ſ. eaſt ſomewhat ſoutherly from you, then you are without the poynt of the weſt grounds. If you bring that poynt more eaſterly from you, you can take no hurt of that poynt. When you are entred the channell, then goe, as is beforeſayd, ſouthweſt & by ſouth, & ſouthweſt, untill that the ſteeple of S. Nicholas come a ſhipps length by weſt the Croſſe ſand-hill, then further take the ſounding of the weſt ſhoare, and runne in by it, towards the foot ſtrand, & alongſt cloſe by it, without going of from it, untill that you come thwart of the white place, or ſpot, on the weſt ſhoare, about the places where it ſtandeth marked in the Card with A. Edge over then from thence eaſt and by ſouth, and eaſtſoutheaſt right to the poynt of the Wood on the eaſt ſhoare, and on ſouth eaſt in alongſt by the eaſt land, cloſe alongſt by the ſhoare, but thwart of the two Iſlands which lye on the ſtarboard ſide, it is a good wayes alongſt the eaſt ſhoare ſomewhat foule & ſhoale, where of you muſt take heed: but go all alongſt by the eaſt ſhoare, untill that you come by the firſt River on the larboard ſide, edge then over again to the weſt ſhoare alongſt ſouthſouthweſt, untill you come to the bight, there it is ſhoale water on the eaſt ſide.

When you are come in the bight, then goe on eaſtſoutheaſt, and afterwards eaſt and by ſouth towards the Stonereach, ſail through there admiſt the channell, alongſt by the buyes, which lye in the middeſt of the deepe, it is on both ſides of the buyes uneven and rugged. Stone reach.

When as you come againſt the Stonereach there ſtandeth a Fiſhers houſe upon the weſt ſhoare, by the little River that runneth into the land, at the north end, or weſt end of the Stonereach, thwart of that foreſayd houſe lyeth a great ſtone under water, which you may ſayle about on both ſides, it lyeth about the middeſt of the fareway, as you come ſayling on, men ſaile commonly about to the weſtwards of it, all alongſt by the weſt ſhoare, like as alſo through the Stonereach, for the weſt ſide is deepe enough, & at ſome places ſomewhat ſoft ground, but the eaſt ſhoare is full of rocks.

When as you are paſt the buyes, then you muſt keepe of againe, ſomewhat from the ſhoare. There was wont to lye a little Iſland at the end of the Stonereach, but that is of late yeares altogether ſcowred a way with the Ice. When as you are now through the Stonereach, the courſe is firſt ſoutheaſt, & afterwards ſoutheaſt & by ſouth, untill you come in the bight, then goe on eaſt. ſ. e. and keepe yet to the weſt ſhoare, untill that you ſee the towne of Arch-Angell, then ſayle right towards it, but avoid the point on the larboard ſide, for it is foule.

For to goe from Arch-Angell further up the River to Kolmo- Arch-Angell.

Kolmogro. Kolmogro it is about twelve or thirteene leagues moſt ſoutheaſt, but the River runneth upwards with many crooked Bights.

For to ſail out of the River. For to ſayle out of the River of Arch-Angell, then runne out by the foot-ſtrand, and keepe the ſounding of the weſt ſhoare. When as you beginne to ſee the ſteeple of S. Nicholas, then bring it a ſhips length to the ſecond or middlemoſt Podeſſemſke, there lyeth a black Hommock upon the ſtrand. The north ſide of the wood within commeth then over that Hommock, then goe on northeaſt and by north, and northnortheaſt, towards the Podeſſemſkes. When as then the wood within commeth to the north ſide of the ſouthermoſt of the two woods, upon the middlemoſt Podeſſemſke, then you are upon the ſhoaleſt of the Barre, but when the poynt of the ſouthermoſt Podeſſemſke is ſouthſoutheaſt ſomewhat ſoutherly from you, then you are at the end of all the ſhoales, and may goe your Courſe through the ſea, where you pleaſe, no ſhoales ſhall hinder you.

S. Nicholas. From the Barre of Podeſſemſke, or from the *River* of Archangell to the roade of S. Nicholas it is foure leagues. There ſtandeth a Beacon at the end of the Iſland, where the Engliſh houſe ſtandeth upon, by weſt that beakon is the roade for the Engliſh ſhippes, in ſix or ſeven fathom, according as they lye neare or far from the ſhoare. The English Kiver. Engliſh River lyeth in there eaſtnortheaſt, and northeaſt and by eaſt, alongſt by the Cloyſter of *S.* Nicholas, but that is ſo ſhoale a river that no ſhips can goe into it; men muſt lade them without with Lodges.

About ſouthweſt and weſt and by weſt from the barre of the river of Arch-Angell lyeth the Salt Iſland, upon it ſtandeth a Cloyſter, and is faſt to the main land. This land lyeth of from thence to the Cape de Onega, weſt and by north.

Warſiga. From the Croſſe-Iſland to Warſiga, the courſe is weſt ſouthweſt, and weſt and by ſouth about foure and twenty leagues. Warſiga is a village, lying on a river, where is a Sammon-fiſhing, which lyeth into the northwards within the land, you cannot come into the River with ſhippes, there is no more then eight or nine foot water, but muſt ſtay without in the Roade before the River, there is cleane ſand-ground, without any fowle ground, ſo that you may anchor there without danger, ſo neare or farre from the ſhoare, as you will.

This River men doe know (when they ſayle alongſt the coaſt) by three high Hommocks, which are higher then all the other, and almoſt of faſhion like the three hills by Bayonne in Galicia, to the northwards of it are white ſand-hills with trees upon them. Even by weſt the three foreſayd hommocks goeth in the river.

For to ſaile from Warſiga to Ombay, the courſe is alongſt by the coaſts a little weſt, weſt and by north, and then weſtnorthweſt, afterwards the moſt northweſt, unto the poynt of Tauria ſix and thirty or ſeven and thirty leagues. About halfe wayes betwixt them, well ſo neare Warſiga as Tauria lyeth on the coaſt a high bare hill, thwart of it and to the weſtwards of it lye ſome bancks, where of you muſt take heed.

Poynt of Tauria.

The poynt of Tauria is a high ſteepe poynt full of trees, to the eaſtwards of this land, the poynt falleth away into a great Baye farre alongſt to the eaſtwards. About five leagues to the eaſtwars of the poynt of Tauria, lyeth a rock, a good wayes from land, which is not very great, but very eaſy to be knowne, it ſheweth a farre of, as if there ſate a great Ape upon it, this rock the Ruſſes call Tourie Babbe, that is to ſay, Grand-Mother of the poynt.

Tourie Babbe.

Within that Rock in that foreſayd Baye it is all ſhoale water; uneven and foule ground, where you may not anchor not have roade, but to the eaſtwards of the poynt Tauria you may anchor for weſterly & northerly winds, ſomewhat to the northwards of the poynt in the Bight, there it is ſhoale, but by the poynt it is deepe, there you muſt anchor cloſe by the land.

Volna Oſtrove. By the weſt poynt lyeth the Iſland Volna Oſtrove, by the Dutch-men called the Reeme-Iſland. From the poynt Tauria to that Iſland, the courſe is northnorthweſt, two leagues.

Betwixt the Iſland and the land of Tauria lyeth alſo a little Iſland, betwixt theſe two Iſlands, you may (for need) ſayle through with a ſhippe, but it is very narrow, at the northeaſt poynt of Oſtrove is roade in thirty fathom, then you lye with the ſhippe, (when ſhe lyeth wended to the Iſland) in eight fathom, ſo very ſteepe and riſing is the ground there.

Salt river. From Volna, Oſtrove, or the Reeme-Iſland to the Gouba, that is the ſalt river, (where men doe lade, lying a halfe league by eaſt Ombay) the courſe is northnortheaſt three leagues which lyeth in north, and north and by eaſt, it is not very broad but deepe, at the comming in it is in the middeſt foure and twenty, and five and twenty fathom, farre within, five or ſix fathom deepe, but there it is foule. Men doe commonly anchor a halfe league within the river, on the eaſt ſide, with an anchor in the middeſt of the river, ſixteen or eighteen fathom, and with a cable on land, there it is good lyingh with all winds, except with a ſouthſouthweſt winde, which bloweth there open in.

Ombay. About halfe a league to the weſtwards of it lyeth the freſh River of Ombay, which is ſo ſhoale and foule, that men cannot goe in there with ſhipps, except they bee ſmall, and alſo the Ruſſes are not willing they ſhould come there; for not to ſpoyle their *S*ammon-fiſhing, there is great ſtore of Sammon caught, which is carried from thence with boats to the ſhipps in the ſalt river.

From thence the coaſt lyeth ſomewhat alongſt weſtſouthweſt and then upon northweſt to Kandalax.

Kierio karick Karga pol. Thereabouts lye alſo more lade-places, where Sammon is caught, as Hierickarick, and Kargapoll, that lyeth ſouthweſt from Ombay, on the Koreels ſide.

How theſe lands doe lye one from the other, and from other lands.

From the Barre of Arch-Angell to the Salt Iſland ſouthweſt ſomewhat weſterly 7 leagues.
From the *S*alt Iſland to the C. *O*nega weſt, and weſt and by north 17 or 18 leagues.
From the C. Onega to the Iſlands Solofky northweſt and by weſt 20 leagues.
From Warſiga unto the poynt of Tauria weſt & weſt and by north, weſtnorthweſt and northweſt 37 leagues.
From Cruys Iſland to Warſiga weſtſouthweſt 24 leag.
From the poynt of Tauria to Volna Oſtrove, northnorthweſt 2 leagues.
From Volno Oſtrove to the Gouba to the eaſtwards of Ombay northnortheaſt 3 leagues.
From Ombay to Kandalax northweſt & by weſt 13 leag.
From Catſnoſe to the Iſlands of *S*olofky weſt or ſomewhat more ſoutherly 37 leagues.
From Catſnoſe to Warſiga northvveſt and by vveſt 16 or 17 leagues.
From Catſnoſe to Polongi northvveſt and by north 23 l.
From the Iſlands of Solofky to Ombay in Lapland north 32 or 33 leagues.
From Solofky to Warſiga eaſtnortheaſt 32 leagues.
From Solofky to Pologni northeaſt & by eaſt 50 leagues.

Heights.

S. Nicholas or the River of Archangell in 64 degrees, 30 minutes.
The Iſland of Solofky in 65 degrees, 10 minutes.
Ombay in 66 degrees, 45 minutes.

The

AMERI

CA.

Womens I.

Vrouwen Eylanden

Hier is varsche visch, dese Walvisch, witte Vossen en varsche Salm.

Cumber lands bay

C. Wolfgang

STRAET DAVIS

London Cust

GRON

Helmsfades field

Dolfsche haven

K. Bals

Brielsche haven

C. Desolation

Martyn Forbisschers Straet

Straat Hudson

C. Bril

Wilds bay

Mr. Ioris bay

C. Maelson

Mauritius bay

Staten hoeck

Carlsgaals hoek

Sadel island

Gansy bay

Sybolds hoeck

Slapers Haven

Clap muts bay ofte Noorthaven

Orange bay

Zuydoost hoeck

Antonis hoeck ofte Cambols hoeck

NOVA

FRANCIA.

Lago hoeck

Savages Bay

C. de Grates

Ball Ile

C. de Grat

Duytsche mylen 15 in een graet

Spaensche mylen 17½ in een graet

Eng. en Fra. mylen 20 in een graet

…rte van
…N-LANDT.
…ids en Ian Mayen ey:
…ge van Nitlandt en de
…chotlandt en Yrlandt-
…mach.

D T.

Dit is …hemael Ys en groote Ysbergen

Koors hoogde

Fleuwe klip

Grims ey

Straum neß

I. Gouberna

Bomgering

Bredefioerd

Arnar fioerd

Gomber Schaer

Hitlandt

Fero

Lounges Fierland ofte Trinitie Eylandt, nu Ian Mayen Eylandt.

Langenes

Papey

Enchuysser Eyland

YSLAND T.

Burgeff fioerd

Reykenes

Vogelscheren

Engelhooft

Vrolums ey

Westmans

Ferro

Hitlandt

Fulo

Barro

Ascaro

Orcades

Fayer hill

De Kimmen

Rona

Skye

S. Killa

Rokol

Bus

S. Patrick

S. Marus

S. Petrus

Terrey

Ila

Sorlinges

Lancaster

Chester

Anglesey

I. Man

Bristou

I. Londey

SCHOTLANDT.

YRLANDT.

ENGELANDT.

THE THIRD BOOK

Of the new

LIGHTNING COLOMNE,

OR

SEA-MIRROUR,

OF THE

EASTERN, and NORTHERN NAVIGATION.

Containing

The Deſcription of Yce-land, Green-land, or the Strait of David: likewiſe the ſituation of John Mayens Iſland; and Spitsbergen: Alſo the ſituation of Candenoes eaſtward, through Waygats, to the Tartariſh of Yce-Sea.

The firſt Demonſtration,

Where in

Is ſhowed the paſſages between Hitland and Yce-land; and from thence to the Straits off David, or the corner off old Greenland, now called Staten-hoeck.

How a man muſt ſaile from Hitland to Yce-land.

FRom hence, or out of Texel to Hitland is the courſe well enough knouw to (allmoſt) all kinde of Mariners. But when ye will ſayle from Hitland to Yce-land, your courſe muſt be from the South-end of Hitland to the South-weſt-corner off Yceland, leaving Weſt-Mana Iſlands on your right hand: the courſe is weſt north-weſtward, a half ſtroak weſterly; and eaſt-ſouth-eaſt, a half ſtroak eaſterly, the matter of an hundred fourſcore and fifteen dutch miles.

Sailing from the ſouth-weſt-corner of Yce-land, ye muſt ſaile northward on alongs the wall, the matter of five miles till ye come to the clift of Reykeneſſe; from thence eaſt-ſouth-eaſt hard underland, till ye come to the haven of Hanifioert: Ye can ſcarcely know that there is a haven here till ye come to the end of the farewater; but ſayling all alongs the wall, till ye come to a blinde Rock ſtanding in the middle of the water, and a little Iſland where on there is a houſe, then ye can ſee the Bay where the road is: Ye may ſail on either ſide of this blinde Rock, but rather on the north as ſouth-ſide; and ſo running inwardly till ye be right oppoſite to the houſe, there ye have a good road and ancker-ground, three, four or five fathoms: Here ye need fear no kinde of windes, the weſt and weſt-north-weſt are the worſt, but without danger, becauſe of the clifts that ſtreatches themſelves from the north-wall: here ye can have good water becauſe of a ſtream that flowes through between the mountains on the north-wall. The Indwellers here be of a reſonable good condition, & brings aboard fiſh, ſtockens and other commodites for a ſmall price, they would rather have linnen as money for thier wares; but above all they are moſt deſirous of burnt-wine. Ye can have here likewiſe ſheep, milk and fleſh for other wares.

A blinde Rock

Road and Anker-ground

The matter of three miles northwards from Hanifioerd runs ſeverall warmwater rivers into the ſea, landwards in, thoſe rivers are ſo hot that if ye ſhould put a piece of fleſh on a fleſh-hook, and let it hang in the water, it is able to boil the fleſh: but on the ſea-ſhoare the waters be luke-warm, ſo that ye may either ſwimme or bath your bodies into them.

He

The Straits of David.

He that would ſaile from hence, to wit, from the ſouth-weſt-corner of Yce-land to Fretum Davids, he muſt ſet his courſe weſtward ſomewhat ſoutherly, that he may reach to the corner of the land, the which corner ye can ſe when ye are the matter of ſix or eight miles from the land: comming thither ye can ſee the Yce which lieth there continually the whole year through: So that in caſe ye ſhould ſet your courſe more ſouthwardly as is above mentioned, ye ſhould not attaine to the cape. Therefore when ye ſee both the land and the Yce, ye muſt ſaile along by the Yce, which ſhall lead you into the corner of the Straits.

The corner of the Strait lieth juſt upon ſixtie grades benorth the Linie, for the Yce ſtretches himſelf according as the wall lieth: and when ye come beſouth the Yce, about nine and fiftie greades and five and twentie or thirtie minutes, ſometimes ſomewhat ſouthly, ſometimes ſomewhat northly, ſo ſhall the Yce lie north north-weſtward from you, a like as the wall the Straidward in lieth, to the hight of threeſcorce three grades, and then lieth the wall right northward, till over the threeſcorce ſix grades and thirtie minutes; and then ye come into the narrow of the Strait, which is about thirtie miles broad; till ye come to the hight of one and ſeventie grades and thirtie minutes: and ten ye come in an open roome Sea lying northweſt, running round northwards towards the eaſt, and from thence ſouthward again to the above mentioned narrowneſſe.

This Sea runs northward to the hight of ſeventie & nine grades, where it is cloſed by faſt land, with a great many bayes and rivers moſt part full of Yce, which becauſe of the ebbing and falling of waters is driven through the narrowneſſe of the Strait into the north-Sea, and from thence unto the coaſts of Terra Nova, into the great-bay of S. Laurence, after and on the weſt-ſide of Terra Nova.

Terra Nova.

The inhabitants of this land on both ſides of the Strait, are heathens and wilde men: and therefore are not to be truſted, though they give never ſo many tokens of friendſhip. Whatſoever they handle or change with you, they lay it on the oares where with they row their Canoe, they truſt no bodie, and therefore are not to be truſted, for as a foreſaid they lay their wares on their oares & ſo delivers it to you. When ye are reſolved to goe on land, ye muſt be well armed, & eſpecially with muſquets, for as for ſwords or Sabels they care not, becauſe they can reach you with their arrowes, or with their Slinges ere ye can come near them; but if ye happen to kill one or two of them with muſquet bullots, the reſt ſhould in haſte flee from you to their mountains where they have their abode.

This land from old Green-land benorth Yce-land lying ſouthward to the cape or Statenhoeck, and from that corner all along to Fretum Davids, and all round about that inward-ſea, is it altogether a faſt land, and joyned to America, untill the north and north-eaſt of Yce-land; yet it is the opinion of ſome men, (as likewiſe of my ſelf) that it is joyned to Spits-bergen, and that becauſe of the rivers which come from the north foreby Spits-bergen, which rivers ye can perceive when ye are on the hight of fourſcore & three grades, & becauſe they ebbe towards the north, it may be beleeved that there is a paſſage, but as yet unknwon.

Staten hoeck.

To know the Land.

Ye can ſee the ſouth-eaſt coaſt of Green-land when ye are the matter of ſix or eight miles from it; and when ye ſee it, then ye are hard by the Yce.

Of the Tydes and flowing of Streams.

The Streams or rivers come out of the north from Spitsbergen, and floweth alongs Green-land.

They ebbe on fourſcore and three grades towards the north, and floweth towards the South.

Situation and Courſes.

From the South-end of Hitland to the ſouth-weſt-corner of Yce-land, weſtnorthweſt, and a half ſtroke weſtlier 195 miles.

From the ſouth-weſt-corner of Yce-land, to the clift of Reykeneſſe northward 5 miles.

From the clift of Reykeneſſe to the haven of Hanifioert eaſt-ſouth-eaſt 12 miles.

From the ſouth-weſt-corner of Yce-land to Staten-hoeck, weſt-ſouth-weſt ſomewhat weſterly 186 miles.

The Heights.

The Cape of Old-Green-land or Staten-hoeck lyeth on 60 grades.

The ſouth-weſt-corner of Yce-land lieth on ſeventie four grades and 5 minutes.

The Mouth of the Strait of David lyeth on 71 grades.

THE

THE SECOND DEMONSTRATION

Which

Containeth the deſcription of

JOHN MAYENS ISLAND.

IOhn Mayens Iſland lieth from Hitland north-ward, according to the common Hollands Compas, or as others ſay n. n. w. upon the half ſtroke: yet it is better to ſail ſomewhat weſtlier as to fall a little eaſtly, becauſe they muſt be on the weſt-ſide of the Neering, for if they fall eaſterly then they muſt needs ſail about the north of the ſame, where they have too great calmneſſe, and ſometimes whirlwindes, that fall in a ſudden from the mountain called the Beeren-berg, or in Engliſh called the Bears-mountain.

In the Spring of the year on the eaſt-ſide of this Iſland is not ſo much yce as on the north-ſide. For the ſea on the north ſide, (which is never above ten miles navigable) is in the Spring commonly alwayes frozen.

The winde blowes there commonly out of the South-weſt, both harder and oftner as out of any other place.

In the South-bay, a ſouth-ſouth-eaſt & a north-north-weſt moone (according to the common compas) makes a full Sea. The floud flowes there from the ſouth towards the north, and ebbes contrarily.

The firſt day of Auguſt (at the north-end of the aforeſaid Iſland) did the Sun riſe in the northeaſt with the one half of his bodie under, and the other half above the Horizon: and the laſt day of July was he wholy under.

On the North-end of this Iſland is a very high mountain commonly called the Bears-montain, the which, if ye behold it from the north, ſeemeth to be cloven, but if ye behold it from the eaſt or weſt-ſide, it ſeemeth round, falling as it were ſmoothly downward, except at the northeaſt corner, where it ſtretcheth it ſelf outward.

The North-corner is hillie and rough, it ſeemes ſomewhat low becauſe of the high ground that lyeth about it: from thence the matter of half a mile ſouthward the coaſt is hillie, ſtay and ſhallow, ſo far from the wall as a little canon can carry, is it about 20 fathoms deep: a little more ſouthward is there a ſmall foot-ſtrand of ſtonie ground, ſo that upon ſome places ye could make ſhift to bring your chaloup or boat, and this ſtretches it ſelf the matter of a mile in length ſouthward.

In or upon this ſtrand there are three Yce-hills high and ſtay, thoſe are congealed of the ſnow-water, which fals in the ſommertime from the top of the mountain, two of them lies near to the North-end of the ſhoare.

From thence further ſouthward is the wall for the matter of a quarter of a mile, (or ſcarce ſo much) hilly and ſtay, as it is at the north-end, and from thence is there another ſhoare about half a mile in length, thereon likewiſe can ye bring your boat.

From thence come we to the Southeaſt-corner of the Bears-mountain, which is likewiſe hilly & ſtay as the aforeſaid wall, ſo that it is impoſſible to come upon it, at ſome places higher other ſome lower, oneven, it is commonly 25 or 30 fathoms high from the water, & within goeth it in ſome place ſomewhat ſtay upward to the Bears-montain.

At this corner lie ſome little rocks ſeparated from the land, whereon are a great many of ſeverall ſorts of fowls, ye can row to and about theſe rocks with your boat: A little about this corner there lie likewiſe ſuch rocks without the wall, between theſe rocks there is a commodious haven, with a little Sand-bay, where ye can eaſily bring up your boat whileſt ye anker; there ye are freed from the ſea, for it is there commonly calm water, although it ſtorms without. Ye cannot perceive that there is a haven there til ye be within the rocks; from theſe rocks weſtward about a ſhort mile, is the wall ſtay & rockie as before, yet not ſo high, all alongs the coaſt is there many ſharp rocks ſtanding as it were out of the wall: from the land off, as well by the ſhoare as by the ſtay wall, the matter of a muſquet-ſhot, or thereabout ye have water ſome ſixtie fathoms deep. Divers rocks. Sand-bay.

When ye have paſſed this ſtay ſhoare, then ye come to a flat ground of black-ſand, which is about a mile in length, about a little canon-ſhot from the wall, ye have 6 fathoms water with black ſand on the ground, this ſtrand is commonly called the great Hout-bay, or Wood-bay, becauſe there is ſometimes found much old broken wood: hereby landwards in lies divers flat hills of black earth and few ſtones, here is the land at his ſmaleſt, for being on the top of this hill, and ſhips ſailing on every ſide of it, ye could make them hear your voice both at once. The great Hout-bay. The Black-hill.

Weſtward from the end of this great Hout-bay, where the land lieth ſouth-weſt to the ſouth, there is another rockie wall, alike to the aforeſaid, ſo far as a piece of canon can carry, further have ye another flat, called the ſmall Hout-bay, with an even ſhoare like to the firſt. The ſmall Hout-bay.

A quarter of a mile Seawards in, by the South-end of that ſmall Hout-bay, there lieth a rock, which to look to ſeemeth to be a ſhip with topſails up: hereabouts is it flat water.

Southward from this ſmall Hout-bay, there lie many rocks, & hills in the ſea, there is likewiſe a ſtay rockie wall; between this wall and the rocks is a paſſage that runs in ſea ſouth ſouth-eaſt on, called the Bears-gat, where within four fathoms ye have ſtonie ground. Ships could come in to ly there, but there is no anker ground. A rock like a ſhip with top-ſails. The Bears-gat.

A mile & a half ſouthweſt ſoutherly from the aforeſaid rock that ſeemeth like to be a ſhip, there lieth another rock of that ſame faſhion, yet not ſo ſharp above as the other, this lieth but a ſmall canon-ſhot from the land: beſides this there are many other little rocks (whereon are abundance of fowls) ſtanding out in a corner: between this and the Bears-gat is the wall rough and rockie, & ſometimes here & there ſmall foot-ſtrands whereon ye can not come with your boat: and from thence begint the land to be higher and ſtonier, for from the aforeſaid corner Seawards in it is rockie & ſtonie, and landwards in full of hills and mountains; in time of need ye may bring your boat to the foot of the hills: half a mile further there lieth more ſuch rocks, ſtayly deſcending to the water; alongs the ſhoare, ſo far from land as a ſmall piece of canon can carrie, it is commonly fiftie or ſixtie fathoms deep.

The matter of three miles ſouth and to eaſtward, from the ſouth or weſt-corner, there lyeth a ſtonie, which at the undeepeſt hath about eleven foot of water, which ſtone in circuit is about ſo big as a man can throw a ſmall-ſtone. A Stone.

Lucas Bouwenſon from Delfs-Haven hath with calm water broken the ruder of his ſhip there on; about this ſtone goeth commonly a hollow water.

The length of half a mile northeaſtward from this ſtone ye haven uneven ground, for caſting your ſound-lead one time ye can have but ſeven fathoms, and at the other time ye can ſound five and thirtie: from this ſtone towards the land falleth the ground by degrees off to the depth of ſix and thirtie fathoms and deeper, yea ſo far from the well as a ſmall peece of canon can carrie, ye have fourſcore fathoms water, with ſoft clay-ground: but about the ſtone the ground is ſtonie and ſandie.

Claes Dirckſon Seyn from Wijck wrote in the year after our redemption 1616. that about eleven or twelve miles ſouth ſoutheaſt from the South-corner of the Iſland, he found 35 or 36 fathoms, with black moulie ſand, and ſmall ſtones.

John Sybrantſon Paelman writes, that ſouth-eaſtward from the ſoutheaſt corner of the Iſland about two miles he found rockie ground, my neighbour had once 60, and I had but 30 fathoms, ſo that it is very uneven there.

About a quarter of a mile northweſtward from the South-corner, there ſtands a rock high above water, with ſundrie other little rocks by him, which are commonly called the ſeven or five rocks, when ye come from the north ye can eaſily paſſe through between them: hard by the land there lieth a Holmken a little above water.

The ſeven or five rocks. Holmken.

From theſe ſeven or five rocks till near under the wall drieth it up from thirtie to five fathoms.

From the ſouthwall north northweſt a ſhort mile the land falleth out with a corner, commonly called the Low-ſouth-corner, on the ſhoare is it low, and there lieth the ſloops that keeps watch.

The Low-ſouth-corner.

Between the South-corner and this corner there are ſcaverall infalls: with a low ſhoare, commodious for boats to come by, in the infalls *is* it ſandie ground, ſix or ſeven fathoms deep.

Between this and the South-corner lye ſome ſmall rocks ſome above and ſome under water: from thence about two canon-ſhot is the land ſomewhat crooked to an infall, which is commonly called, the Bocht of Guinea.

The Bocht of Guinea.

From this aforeſaid Bocht northeaſt northward about half a mile, come ye into the South-bay, a leſſer Bocht as the aforeſaid, there were wont to ſtand ten tents in this Bay for the handling of fiſh oil, but in one year the ſea waſht away three tents, thirteen chaloups, tuns and oily-veſſels, pertaining to the chamber of Amſterdam, it waſht away like-wiſe moſt of the ground whereon they ſtood, wherefore thoſe from Amſterdam did delve a large peece of ground the ſommer following, whereon they have ſet two tents.

South-bay.

A fore this Bay ye have from nine to fifteen & ſo forth to eighteen fathoms, with black ſandie-ground, a little further off ye have five and twentie, yea thirtie fathoms, with ſhort ſtonie ground; and again ſo far as a ſmall piece of canon can reach ye have fourſcore fathoms, and ſoft ground.

Between the Bocht of Guinea and the South-bay the wall is very ſtay, ſtonie, and rockie: when ye ly on fifteen fathom afore this South-bay, then ye can ſee through between the land and the Fowlie-rock, or Vogel-klip.

Fowlie rock Red-hill.

Some two canon-ſhot from this Fowlie-rock into the Bocht there lieth a ſmall rock; & on land there is a Red-hill; in the aforeſaid Bocht there lieth a channel, whereon ye may lay four or five chaloups.

The matter of a mile north-eaſtward from the South-bay, ye ſhall finde a little corner, then ye have a gate or entry where ye can row through from the mountains into a Kolk or depth, there ye have ſo much room as to lay ſome twentie chaloups on; & it is very convenient for the waiting on whales: this is called of Sea-men the Hoepſtocksbay.

The Hoepſtocks Bay.

A large canon-ſhot from this Hoepſtocks-Bay ye ſhall finde a corner where there are many ſmall rocks, (which are called the Rudſen) from thence to the Red-hill the wall is rockie and ſtonie.

The Rudſen.

The matter of a mile north-eaſt northerlie from the aforeſaid Rudſen, there is an outlying corner, commonly called the Walruſh-gate, without or rather at the which there lieth the Brielliſh-ſteepel, between theſe two the lead hath a great infall, which is commonly called North-bay, and is the moſt convenient place of all for the handling of fiſh-oile.

Walruſh-gate.

A quarter of a mile from theſe Rudſen or ſmall rocks towards the Bocht, there is a flat place, which is called the Wood-bay, becauſe of this flat the land lieth high, this flat is a ſhort quarter of a mile large, between this and the Walruſh-gate there lieth a great flat Channel, whereon lie all the tents and kettles of the chambers of Holland and Zeeland: this Both hath a flat ſandie-ground, where the ſhips may lie at anker on fifteen or ſixteen fathoms water, about a canon-ſhot from land. In the foreſommer the ſhips lie near on land within the Bay on eight or nine fathoms water.

North Bay. Wood bay.

From the Brielliſh-ſteepel the land lieth eaſtward up, and hath for a mile flat ſtrand, which is very convenient for chaloups to keep watch: the aforeſaid corner of the Walruſh-gate is very high and ſtay towards the ſea; at the end of the aforeſaid mile, ye finde nothing but rockie ſtay land without any ſtrand, (and which is worthie to be made mention of) a canon-ſhot from thence ye have a ſtone, on the faſhion of a ſteepel.

At the end of this aforeſaid land a little foreby the ſteeple, there ye finde a little infall, which is called Mary-Mus-bay, becauſe that Mary Mus from Rotterdam, of happie memorie, was the firſt that ever ſent a ſhip there to boile oil: there is a very commodious anker ground; for about a canon-ſhot from land, ye have five, ſix, or eight fathoms water: ond a far way Seawards in ye have ſmooth water, likewiſe ye have a ſhoare fit for all kinde of commodities uſeable for boiling of fiſh.

The Mary-Mus-bay.

A little landwards in ye have a pool, where out ye can take fiſh, yea, ye can bring your boat from ſhoare into that ſame pool.

From the eaſt-corner of Mary-Mus-bay the foot of the mountains ſtreatches themſelves in ſea, very ſtay & high towards the weſt ſtrand or ſhoar.

From the foot of theſe mountains, ſetting your courſe north-eaſt northerly for the matter of a quarters of a mile, ye have a flat ſhoar, where aforetimes there hath ſtood a croſſe on a grave: between thoſe two the land hath a great infall; & hard under wall a ſtonie ground; the wall of it ſelf is flat and ſandie, ſo that a man might have occaſion on ſeverall places to boil fiſh.

The Northweſt Corner.



BEſides this aforeſaid Bay two muſquet-ſhot from land, ye have nine fathoms depth; off-failling ground to the ſeveenth fathom: about a muſquet-ſhot further ye have good ſingle ſandy ground: but when ye come to have five and twentie, thirtie, or fiftie fathoms, there ye have foul ſtonie ground, which continneth till ye come ſo far in Sea, that ye can ſee both the corners of the land: half mile from the land yee looſe the ſtonie-ground; and again hard under land, where ye can ſee the ground, it is ſtonie.

From the croſſe to the next Yce-hill, it is over all flat ſandy ground, and in ſome places ſtonie, it is about half a mile broad, and ſome places are fit to lay your boats on that keeps watch, but is not convenient for anckering of ſhips, for deepneſſe.

From the northweſt corner towards the eaſt ye have a ſtonie and ſtay wall, a quarter of a mile in length, where ye finde a convenient little bay, whereon ye may ſet one kettle to boil fiſh in: but becauſe a ſhort Canon-ſhot from thence it is well 300 fathoms deep, therefore it is inconvenient for ſhips to ly there.

From thence runs the wall, well a half mile in length eaſtwardly up; at the end whereof there is a little bay, where ye could ſet a kettle and lay a boat on watch, but a ſhort canon ſhot from the land, it is well three hundred fathoms deep.

From thence to the north-corner, which is half a mile, on the ſhoar is it ſtonie, knottie and ſtay.

On the north-ſide of this Iſland the yce lyes ſometimes ſo near, that if ye would ſail from hence to Spitsbergen, ye ſhould be forc'd to ſet your courſe fourtie, five and fourtie, yea ſometimes fiftie miles, northerly about; and ſometimes ye can ſail right northwards from this Iſland wel five and fourtie or fiftie miles, to the heighth of 75 grades norther bredth, before ye can ſee any Yce.

By fair and clear wether ye can ſee the Bears-mountain when ye are thirtie miles from it. Now adayes there are not ſo many fiſh taken about this Iſland as was wont, becauſe they run now more towards the north then they uſed to do.

At John Mayens Iſland the veriation is a ſtroke and a half northweſtward.

Of the Tydes and flowing of Streams.

In the South-bay a ſouth ſoutheaſt and northnorthweſt Moon, according to the Hollands compas makes high water: the floud flows from the ſouth running northwards, and ebbes contrarily.

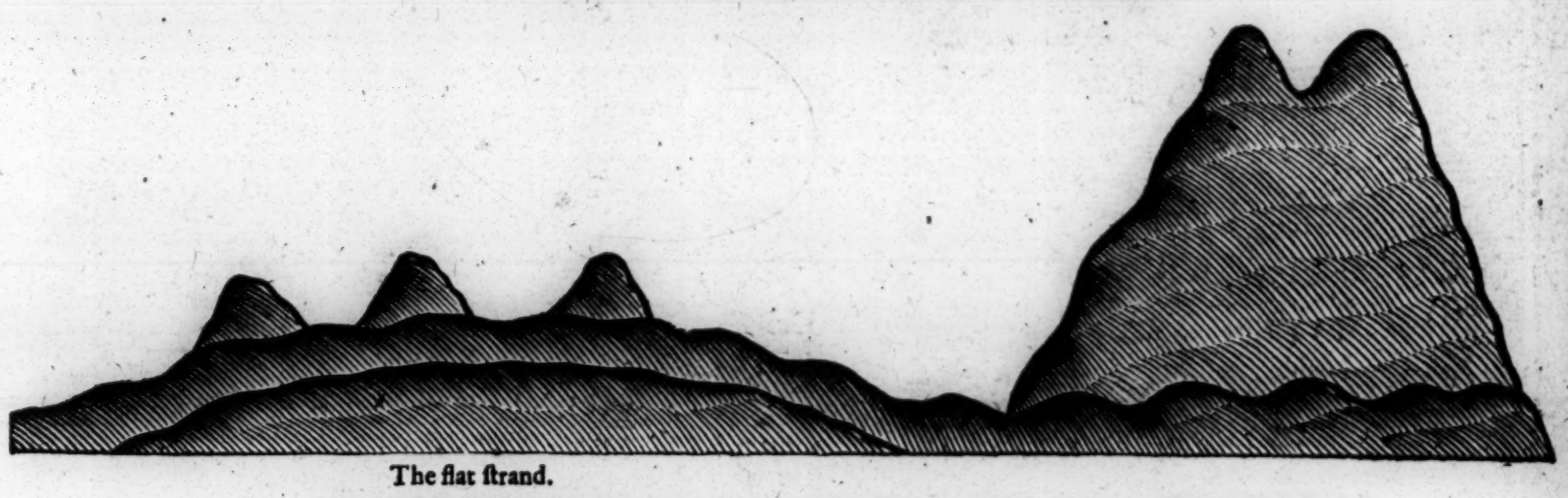
Situation and Courſes.

From Hitland to John Mayens Iſland, north and northweſt, at the half ſtroke 160 miles.
From the North-end of John Mayens Iſland, to the North cape, eaſt ſomewhat northerly, but little 170 miles.
From the North-end of John Mayens Iſland, to the ſouthermoſt point of Spitsbergen, weſt northweſt, half a ſtroke northerly 165 miles.
From the South-end of John Mayens Iſland, to the Iſland Grijp, on the Liet of Dronten, northweſt, a little more northerlie 147 miles.
From the South-end of John Mayens Iſland, to Langenes, the northermoſt corner of Yceland, ſouthweſt, half a ſtroke weſtward 111 miles.
From the north-corner to the ſouth-corner, north-eaſt and north-eaſt eaſterlie 9 miles.
From the North-corner to the South-eaſt-corner to the little Sandiebay, north-eaſt northerly, and north northeaſt 2 miles and a half.
From the little Sandiebay to the Eyer-Iſland, or the beginning of the great Hout-bay, eaſt ſoutherly 1⅛ of a mile.
From the Eyer-Island to the firſt Rock that is like to a ſhip with her ſails, ſouthwarp weſterlie 1¼ mile.
From the firſt Rock to the other Rock which is alſo like to a ſhip, weſt and a little ſoutherly 1¼ mile.
From this ſecond Rock to the ſouth-corner ſouthweſt 2¼ mile.
From the South-corner to the five or ſeven Rocks, northweſt ¾ mile.
From the ſouth-corner to the low ſouth-corner or the Hoy-berg, north 1 mile.
From the Hoy-berg to the Southbay, northeaſt 1½ mile.
From the Fowlie Rock to the Hoepſtock-bay north-eaſt 1 mile.
From the Fowlie-Roak to the Rudſen north-eaſt ſcarce 1¼ mile.
From the Rudſen to the Brielliſh-Steepel northeaſt northerlie 1 mile.
From the Brielliſh-Steepel to Marie-Mus-bay eaſt northerlie 1¾ mile.
From Marie-Mus-bay to Muyens ſecond Croſſe-corner, north-eaſt 1¼ mile.
From Muyens Croſſe-corner to the North-corner, eaſt 2¾ mile.

The Heights.

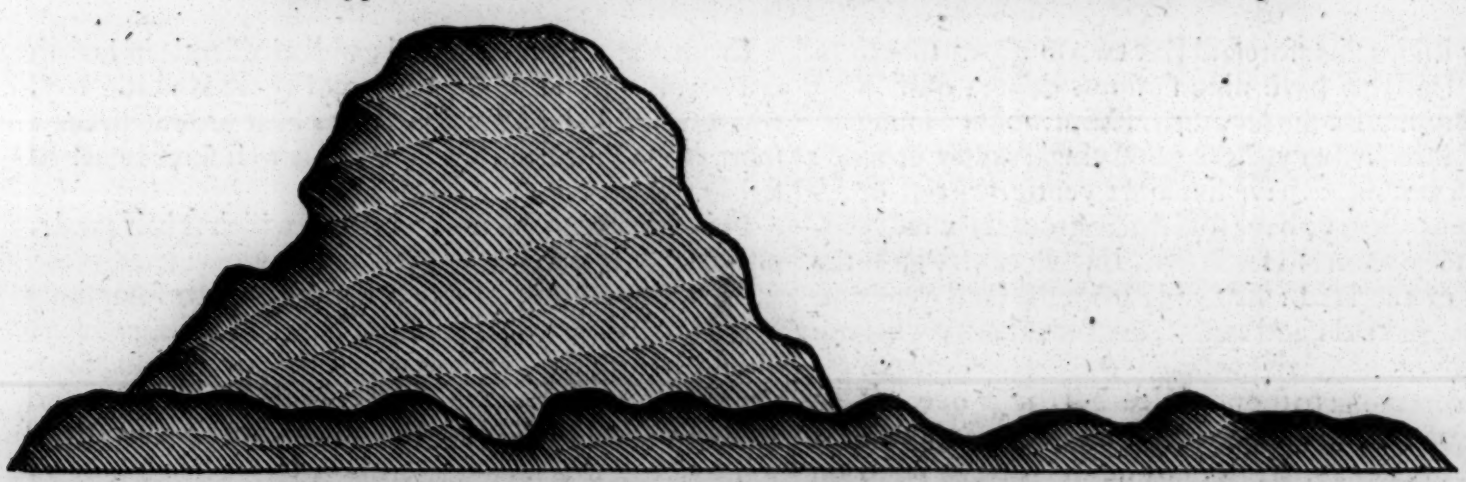
The North-corner lieth on the hight of 71 grades 23 min.
The South-corner lieth on the hight of 71 grades.

Thus appeareth the land in your ſight when ye are on Sea.

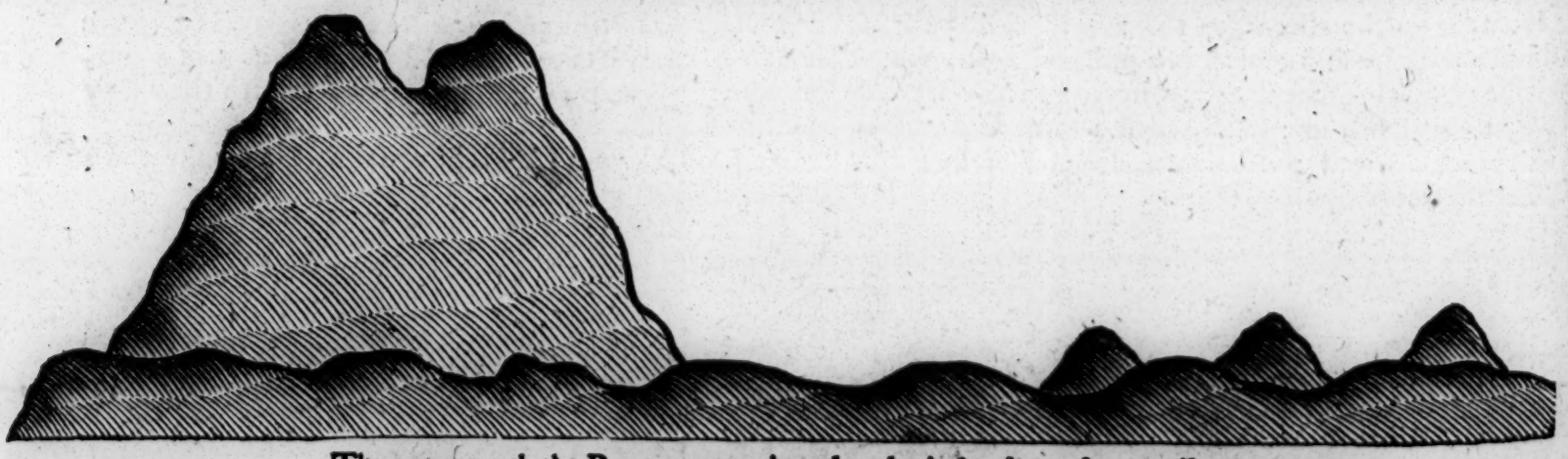


The flat ſtrand.

Thus appeareth the Bears-mountain, when he is northward two miles from you.



Thus appeareth the Bears-mountain, when he is weſtward two miles from you.



Thus appeareth the Bears-mountain, when he is ſouthward two miles from you.

T

Duytſche mylen 15 in een graet
Spaenſche mylen 17½ in een graet
Eng. en Fra. mylen 20 in een graet

Noordhoeck
Oofthoeck
1e Yſbergh
2e Yſbergh
3e Yſbergh
Beeren bergh
Muyens 2e Cruys hoeck
Meynſte Yſbergh
1e Cruys
Cleyne ſand bay
Mary mus bay
Eyer Eyland of Vogel Clipen
Groote
Hout bay
Brielſche toorn
Walruſch gat
Noorder ofte Engelſche bay
Cleyne Hout bay
Klip als een Seyl van een Schip
Houthay
Rudſen
Hoepſtocks bay
Klip als een Seyl
Rod bergh
Suyd bay
Vogel klip
Bocht van Guinea
Suyd hoeck ofte Kloyberghs
Suydhoeck
De 5 ofte Seven klippen

Pas-caert van
IAN MAYEN
EYLANT.
Verthoonde alle de ghelegentheyt van alle bayen, inbochten, diepten en en droughten.

Duytsche mylen 15 in een graet
Spaensche mylen 17½ in een graet
Eng. en Fra. mylen 20 in een graet

Amsterdamsche Eyl:
Deensche Eyl:
Zuyder gat
Vogels sandt
't Eylandt met de Kloof
't Engelse Eylandt
Seeusche uyt kyck
Lage hoeck
Vlacke point
Moffen Eylandt
Graeuenhoeck
't Zuyd oosten landt
Kelies sound
Noordhoeck
Vogelhoeck
Vaerland
Engelsche bay
S. Ians haven
Behouden haven
Zuydhoeck of Kynnae
Groene haven
Clock bay
Hoorn sondt
Clock rivier
Michiel Renders Rivier
Sardammer Rivier
Schoonhaven
Rheelant
Ondiepe R.
Koude herbergh
Foxnes
Foule sond
Whales head
Mosselwaert Mound
Mosselwaert Edge
Moniers bay
Arentsgelagh
Hollandsche bay
Engelsche bay
Magdalena bay
Kars sound
Rees bay
Rheenerwalt
Ogbrycht
SPITS-
BER-
GEN.
Whales Wiches bay
C. Barian
Lees Forelandt
C. Blanco
Wybe Iansz water
Barrowes sound
Deeve bay
Swarte hoeck ofte Black point
Stans Forelandt
Akemael bay
Jacobsocken land
Hopen Eyland
Beeren Eylandt
Noord Caap
I. Syrocy
I. Lehuysen
I. Ingen
Camen
Sandin
Duinsfoorde
Suyderfondt
Noordfoelen
Foele
I. Tromsondt
Beelsbergen
Rulsoe
Ryfsfoorde
Hinlopsond
Cornelisfoorde
Ryfsfoorde

Pas-caerte van
SPITSBERGEN
met alle haer Rivieren, havens, bayen, sanden en droogten.
als mede
Hoe men C. de Uytkyck op Spits-bergen van de Noord Caap en Beeren Eylandt bezeylen sal.

The third Demonſtration,

Containing

The ſituation of the Bears Iſland, the Hoopen Iſland, as alſo of whole Spits-bergen for ſo much as they are northerly and eaſterly known as yet.

The Bears-Iſland.

WHen ye come from the North-cape to the Bears-Iſland, your courſe is north northweſt and north-weſt northerly, about 54 or 55 miles, Syroy then lyes right north northweſt from the Bears-Iſland. (Upon the aforeſaid North-Cape there are people who lives till they be ſeventy or four ſcore years old, they never eat any bread, for they live on fiſh and fleſh.)

Syroy.

The Indwellers of the North-cape towards Finmarken ſay, that that Bay never freeſes, ſo that they get their living moſt by taking of fiſh and drying the ſame.

The Bears-Iſland is reaſonable high, ye can row about it in the ſpace of ſix hours; at the northweſt corner thereof comming within three miles to it, ye can finde ground of fourtie fathoms, and how nearer te land ye come how undeeper it is, for within a canon ſhot to it ye are on 15 fathoms.

Out of the Bears-Iſland ye can have refreſhment of waters although it were for an hundred ſhips: there groweth likewiſe brave herbs, where of ye can make ſalate, which refreſheth a man extraordinarily: there are alſo many fowls: ye finde there coals to burn, not unlike to the cots coals.

At the northeaſt corner there lieth a little Bay, where ye can ly ſafe after a little Iſland, corner windes from eaſt ſoutheaſt to weſt ſouthweſt blows flat into this bay, but as for other windes ye ly ſafe; ye can come into this bay at the ſout-ſide there of, at the north-ſide it is almoſt faſt to a great Iſland, except a narrow paſſage where ye can come handſomely through with a chaloup; hereabouts is no other Inham to run into in time of ſtorme, but round about ye have anker-ground; yet ye muſt ly in open Sea, the ground is durtie, & there goeth a hollow *Sea*, ſo that it is not good to anker there in time of ſtorm: the floud floweth commonly from the ſouthweſt toward the northeaſt: a ſouthweſt & northeaſt moone make high water: & it floweth commonly four foot up & down. At the time of year ye can take good kods, and haddoks at the *Bears*-Iſland.

The Eaſt-coaſt of Spitsbergen.

The Hoopen-Iland.

FRom the Bears-Iſland to Hoopen-Iſland, the courſe is northeaſt northery as is ſuſpected two and thirtie miles; the Iſland is ſeven or eight miles in length, and not above three muſquet-ſhot broad, it lieth eaſt northeaſt, & weſt ſouthweſt, at both ſides, ſo wel at the ſouth as the north: but on the north ſide alongs the whole Iſland lye have good ancker-ground, on twentie fathoms, a great half mile from land, on the ſouthweſt end and the northeaſt end ye have ſome flat ground, where the Walruſhes uſe to come, otherwiſe it is overall ſtay and ragged, but on the ſouthſide it is ovall ſtonie and rockie, and not fit for anckering, of which ye muſt take heed: yet ye may ſail within half a mile alongs the coaſt without danger, but there is nothing on this Iſland that ſerveth for refreſhment.

There hath been ſome who have ſailed beyond the Hoopen-Iſland eaſt northeaſtward 24 miles, but found no land, found aboundance of yce, & could reach no ground.

The Hoopen-Iſland appeareth to you a five mountains, where of the northeaſt end is the higheſt.

At the northeaſt end of Hoopen-Iſland there is a valley wel a quarter of a mile in circuit, whereon reſorts a great number of Walruſhes, yea ſometimes it lieth whole full of them: there are likewiſe an innumerable number of Sea-mews and other *Sea* fowls, they flie ſometimes in ſuch multitudes, that they hinder you from the ſight of the firmament above your head; ſo that the land is wel enough to be known by the off and on flying of thoſe fowls ſeeking food for their young ones.

From the northeaſt corner of Hoopen Iſland to Black-point, the courſe is north weſterly, ſome ten miles; but before ye come to Black-point, on the ſoutheaſt ſide there lieth a great many ſmall Iſlands; from the maſt of your ſhip ye can tell ſixtie of them, but indeed there are ſo many as if they were ſowen, and that all alongs the coaſt ſo far as ye can ſee; and that towards the northeaſt & weſt northweſt, as we ſuſpect, altogether ſtones and rocks.

Black-point.

When Black-point is four miles north eaſterly from you, you ſee a great Iſland, in compariſon of the other: when ye are a large muſquet-ſhot on the ſouth ſide of this Iſland, ye ly on thirtie fathoms ſtitch-ground, it is a ſtay ground, for the length of a ſhip more Seawards in, ye have 60 fathoms; within the aforeſaid Iſlands towards land, ye can ſee open in *Sea*, where the Iſlands are not ſo cloſe together.

A mile further eaſt from the aforeſaid great Iſland, without the low Iſlands, there lyes a great many blindes in *Sea*, where ye can have no anker-ground, the *Sea* beats much on thoſe blindes when it is high water, yet there is no great floud.

On the northeaſt corner of Hoopen-Iſland there goeth as ſtrong a ſtream as there doth in Texel, the floud cometh from the ſouthſouthweſt & runs along the land. A ſouthſouthweſt winde maketh there the higheſt water: on the aforeſaid Iſland is no refreſhement to begot, (ſo far as is yet known, but is all ſtonie low land: neither can ye ſee the aforeſaid Iſlands from farre. But Black-point is a very high land, ſo that when it is fair weather ye can ſee it from Hoopen-Iſland: thereabout ye have thick miſts: yea ſometimes for the ſpace of five or ſix dayes, ye ſee not once the Sun, but all thick cold miſt.

From Black-point, ſo lyeth the coaſt eaſtward on, northeaſt up, ſo far as ye can ſee, to Wijbben Janſons water weſt northweſt, but the whole coaſt along lieth full of rocks & little Iſlandes, the floud commeth out of the ſouthweſt by the Cape on the eaſt ſide of Loock-out, and runs north-eaſtwardly up to Wijbben Janſons water.

Ye can ſcarcelay lay on by the eaſt ſide of the Cape Look-out, becauſe of the Yce that commeth from the eaſt of Nova *Sembla*, and runs along the coaſt, (as if it were faſt land) like to a bank, ſo that ye can ſcarcely come through.

The Weſt-coaſt of Spits-Bergen.

Look-out, or Kijck-uyt. FRom the Bars-Iſland to the Cape Loockout or the ſouth corner of Spits-Bergen, is the courſe north n. w. ſomewhat weſtly, about eight and twenty miles.

There lyes a ſtonie channell on the ſoutheaſt cape of Look-out Seawards in wel four miles in lenght, on ſome places when the water rages ye can ſee it beat on the channel, ye can ſail through between this channel & the land, but with great danger.

From the cape Loock-out to the ſouth-end of the foreland, the courſe is north northweſt ſix or ſeven & twenty miles; between both lyes Hoorn-zond, Klock-bay or Belzond, and Yce-zond.

From the cape Loock-out to Hoorn-zond the courſe is north northweſt ſix miles; it is between both ſtonie and foul ground.

Hoorn-zond. The Hoorn-zond is a wide bay, and lyes without danger of all kinde of windes: The Engliſh have their thents ſtanding there, and comes every year to take fiſh.

Bel-zond. Between Hoorn-zond and Klock-river (by others called Belzond,) lyes the coaſt northwards weſterly and n. northweſt, all alongſt the coaſt it is ſtonie and foule, and full of rocks and craigs.

Willem van Muyens haven. Within the Bel-zond lies ſundrie rivers and havens, & a little within the corner on the north ſide, lyes Willem van Muyens haven, (that is ſo called, becauſe Willem van Muyen had fiſht there aforetimes) a little northwards up runs a river landwards in, which is called the undeep river, whereon lyes the cold harbour, where aforetimes there have ſtood ſome tents: a little more ſoutherly lyes Michel Rinders river, and more ſoutherly from the a foreſayd river lyes Sardammer-river, which a great way landwards in.

The undeep river.

From the Sardammer-river weſtward, or ſailende in through Klock-bay, a little abouth the ſouth corner there lyes a fair harbour, which becauſe of its conveniencie is called the Fair-haven, which is a brave road, & in time of need a man might keep a ſhip there without anker to tow: it is a clean ſhipperie ground.

The fait haven.

From the Klock-bay to Yce-zond lyes the coaſt all northweſterly, and northnorthweſt, between theſe two it is durtie and foul, without any bochts or Infalls, yet when ye come a little about the ſouth corner ye finde there the Green harbour, there is a good road, & ye may freely anker there, ſo hard under the wall as ye pleaſe, and that on eight, ten or twelve fathoms water, it is there every where a clean flat upgoing ground, and ye lye there befreed from all ſorts of windes.

The Safe haven. When ye come a little about the north corner ye finde the Safe haven, which lies northward up, & ſailing a quarter of a mile upward, ye come to a good road, which is called the Safe-haven; the ground is ſomewhat ſtay but clean, there ye may let anker fall, on thirtie fathoms, and ye ly ſecure from all windes.

Farther eaſtward up, the fare-water runs ſo far up that never any boat yet hath been at the end of it; for it lyes moſt commonly the whole ſommer through full of Yce; but if ye ſhun this north-wall, there is no danger ye need to fear.

The Yce zond. The Yce-zond is a wide river to come into, but when ye come into the Hoorn-zond or Safe haven, or get into the Yce-zond, & when ye perceive that the yce begins to come out of the ſouth, ye muſt make haſte to lift anker, otherwiſe ye ſhould be befiedged with Yce, ſo that ye could not comme forth, and chiefly in the after-ſommer.

Whileſt ye ſail this paſſage upward, ye ſhall finde a great many Roes, of which ye can take ſome: and all alongs the ſhoar ye have ſuch a multitude of fowls on the rocks, where they breed their Youug-ones, that by their dung the rocks grow, as if it were green: there growers likewiſe a ſort of herb, which is called Slae, and is a like to ſcurvie-graſſe, the which herb taſtes even as ſalate, and refreſhes a man extreamly.

From the Yce-zond to the ſouth-corner of the Foreland, the coaſt lies northweſt, yet ye muſt ſhun the ſouth-corner, becauſe it is a little foul: there lies a rock ſouthweſt from the land of ſeawards in, which is a quarter of a mile long. The Foreland lie ſouth and north from the ſouth to the north-corner, or fowlie corner, wel 15 or 16 miles in length: a mile and a half benorth the ſouth-corner of the Foreland there lies two Iſlands, the one a canon ſhot from the other, and as far between them & the wall; on theſe Iſlands there are many thouſands of fowls like to Rotgeeſe, and drakes, there are likewiſe a great multitude of egges to be got: a great mile benorth there lies a rock of clear white ſtones (under which there are many great ones) this lies from the wall ſeawards in about a mile & a half: three miles beyond the Perſh-Rif; there lies a little Iſland near under the ſhoare, where likewiſe are many fowls & egges to begot, between both it is reaſonable clean, but towards the wall lye ſome rocks, wherefore ye muſt take heed that ye come not too near to the wall.

About the north-corner of the Foreland, between the maine land ye can caſt anker on twentie, eigteen, fifeteen, ten, and four fathoms, according as ye are far into it, but neareſt the foreland.

Croſſe-bay. At the faſt land lies the Croſſe-bay, and ſomewhat forward ſoutherly within the foreland, there lies the Engliſh-bay, where the Engliſh come a fiſhing.

The Engliſh bay. Madaleenen-bay. From the Fowl-corner or north corner of the foreland to the Danes-Iſland, the courſe is northeaſt northerly, the matter of nine miles: under way lies Madaleenen-bay, where ye have a good road at the ſouth-corner of the bay, but it is high ſtay land, and we caſt anker commonly a little within the ſouth-corner, yet ye may ſail a little farther in, & let the ancker fall at the north wall, for ye have every where good ground on fifeteen, twentie and five and twentie fathoms.

Thenorth-corner of the Madaleenenbay is the ſouth-corner of the Engliſh-bay, which is ſtonie and foul, and very dangerous for thoſe that knows it not.

Engliſh loock-out. From the Madeleenen-bay to Robbe-bay, the courſe is north north eaſt and ſouth ſouthweſt two miles, between thoſe two there lies a low Iſland, which is called the Engliſh-look-out, from whence a ſtonie channel lies, in length of a canon ſhot: ye can come through this channel, but with great danger.

From the Robbe-bay (which lies on the Danes-Iſland) to the ſouth bay, the courſe is north north-eaſt about half a mile, we ſail commonly benorth the ſouth-corner of the ſouth-bay, into the bay, but when ye come into the ſouth-bay, ye muſt ſhun the north-wall, for it is foul; in the incomming ye may go ſomewhat near the northwall, and caſt anker on ten, fifeteen, ſixteen or twentie fathoms good ground, ſafe from all windes.

Amſterdams Iland.

The

The Hollands or Maurits-Bay.



AT the north-corner off the Sout-bay there lieth four ſmall Iſlands, of which the uttermoſt is the greateſt from the weſtmoſt part of thoſe four Iſlands, to the Hollands or Maurits bay, the courſe is eaſt northeaſt a quarter of a mile, if ye ſhun the rocks, ye need fear no danger, except ſome rocks, otherwiſe is it a fair coaſt, for ye may ly at anker under two ſeverall corners of this bay, and that a canonſhot or two from the wall as ye pleaſe, & that on fifteen, 18 or 20 fathoms: if ye ſail a little ſ. ſ. e. in, ye can ſee the Hollands ſhips lying at anker a fore their thents: but if ye would ſail to them, ye muſt not come nearer the ſouth wal as where ye have 7 fathom water: and then ye come firſt where the Amſterdams tents are, when ye are there ye may go as near the wall as you pleaſe, yea if there come an Yce, ye may make your tow faſt on land, & need not fear any windes: then come ye to the tents off the chamber off Middelburgh and Vliſſing, likewiſe where the Danes and others ſtands: From the weſtmoſt tent there runs a craig off, by the which ye cannot come, it runs moſt the whole paſſage over, and then ye ſee flat out off the Sout-Bay; on the ſouth-ſide off the a foreſayd craig there lieth ſundrie little Iſlands, as alſo many ſtones under water: it were poſſible to ſail from hence out off the South-Bay to Sea, but it muſt firſt be marked with beacons or tuns, becauſe it is a narrow paſſage: from the weſtmoſt tent out of the South-Bay is about a mile in length, and is called the Amſterdams-Iſland, becauſe their tents ſtands there: the place where the tents ſtand, is about a muſquet ſhot in breath, after which runs a Kinde off water or a ſtillſtanding pool.

Amſterdams Iſland.

Eaſt ſoutheaſt and eaſt northerly from the Amſterdams tents lie two Yce-mountains hard on ſhoare; ſometimes the Yce comes down with ſuch a force, that they make the ſhips that lie a fore the tents to ſturre: the land within the bay is very high and ſtay, as likewiſe it is by the Amſterdams and Danes Iſland, although not ſo high.

At the South-corner of the Hollands-Bay lieth a little Iſland hard under-wall, called the Devils-Iſland; ye need not fear it; for ye may ſail hard by it: From that ſame corner to the Vogelſang, the courſe is e. n. e. a great mile: The Vogelſang is an Iſland, clean round about, for ye may let anker fall where ye will. From hence eaſt ſoutheaſt a canonſhot lieth the Iſland met de kloof, or cloven Iſland: ſo called, becauſe the mountain that lieth on ſhoar is cloven, and lieth between the Vogelſang and the aforeſaid Iſland. Devils-Iſland, The Cloven Iſland,

Between the faſt land and the aforeſaid Iſland, there lie divers Iſlands, who becauſe of their multitude, are called Archepelliga; in theſe Iſlands are diverſe roads to be found for thoſe that are acquainted there, but none to be had at the faſt land. Archepelliga,

From the cloven Iſland to the Iſland called the Zews-uytkijck, (or Look-out:) the courſe is ſoutheaſt eaſterly about half a mile: between both there lieth a little round Iſland, called the Geeſe-Iſland: when ye come thither ye muſt ſail trough between this and the Zews-kijck-uyt, keeping the Ganſen-iſland a canonſhot from you ſeawards in: at the Zews-iſland ye have good anker-ground and lieth on 20 or 15 fathoms good anker-ground. The Zews-uyt-kijck. The Geeſe-Iſland,

That paſſage which runs between the Iſlands and the faſt land, ends between the Zews-iſland and Moniers-bay: it is poſſible to ſail through the Hollands-bay, but onely for thoſe who are uſed with thoſe paſſages.

From the Zews-uytkijck to Moniers-bay is the courſe ſoutheaſt a half mile, and the paſſage is almoſt a quarter of a mile broad; & on the ſouth-ſide there lieth a haven called the Eyer-(or egge) haven: Moniers-bay is not fit to ſail into, becauſe it is ſtonie foul and rockie, and ſeldome uſed. Mo-niers-Bay. The Egges-haven,

On the e. ſide of the Zews-kijck-uyt, in the after-ſommer, ye have often ſ. w. windes with great calmneſſe, and in the fore-ſommer northerly windes; although ye have had a good gail at ſea: how farther eaſt ſo much worſe: the

floud

floud floweth from the ſouth toward the north all alongs the coaſt: it floweth wel eight hours, and ebbes in leſſe then four: All the Yce that cometh with an eaſt winde from Nova Sembla, cometh with a great fource along the north coaſt of the cape the Kijck-uyt, into the Hollands bay; yea ſo hard that the ſhips have enough to do to ſhun it; this al wayes ſo when ye have often eaſtwindes in the fore-year; then it is driven to the weſt-ſide of the cape the Kijck-uyt, where the yce lieth and ſwimmeth till it be-driven by the ſouth-flound untill the coaſt of the Fore-land ſo that all the bayes are filled there with, from thence it runs northward on, not knowing wheter.

From Moniers-bay to the Red-bay, the coaſt lieth eaſt ſoutheaſt four miles; the coaſt is every where foul and ſtonie, hard under Moniers-bay it is a low land, yet by piece and piece climming upward to the Red-bay: the eaſt-corner of Moniers bay is called the Low-corner.

The Red-bay.

From the Red-bay to Reene-velt, the courſe is eaſt-ſouth-eaſt five miles; the coaſt is not clean, yet ye get anker-ground on twenty or eighteen fathoms alongs the Reene-velt, yet ye ſhall finde no clean ground.

The Reene-velt.

The Reene-velt is low even ground, in the middle thereof lieth a little round-hill, which when it is from the ſouthſouthweſt from you, ye have all along the coaſt off Reene-velt anker ground, as is aforeſaid.

On the eaſt-ſide of Reene-velt there runs a broad ſail-water, called the Eaſt-wijck, at the end of which never any hath been as yet, this water runs very far landwards in, and is well three miles broad: on the eaſt-corner of the Eaſter-wijck lieth a Gray-corner, & lieth from Reene-velt ſouth-eaſtward three miles, as is aforeſayd. The Reene-velt lieth from the outmoſt off the Iſland eaſt-ſouth-eaſt ten miles. From Reene-velt northeaſt northerly four miles lieth the Moffen-Iſland where are many Walruſhes.

Gray-corner.

From the Gray-corner with a ſoutheaſt courſe, ye ſail to the South-eaſterland on, over a bay which is four miles broad, which bay runs ſouth, and ſouth ſouth-weſt.

The Eaſter-land runs eaſt north-eaſt upward, but it is yet unknown how far, it is a even lane, reaſonable high, but of divers ſorts of earth, a like to Spits-bergen, ſo that it is thought to be an Iſland.

The whole weſt coaſt of Spits-bergen is wholy high uneven land.

The difference at Spitſbergen is 22 grades north-weſterly; when the Sun is ſouth ſouthweſt he is at the higheſt there, according to the Hollands compas.

In the fore-ſommer ye have there commonly eaſterly, and in the after-ſommer ſoutherly windes.

Likewiſe on the weſt coaſt of Spitſbergen in the fore-year ye have commonly eaſt and northeaſt, and in the after-year moſt ſoutherly windes.

Of the Tydes and flowing of Streams.

At the weſt-coaſt of Spitſbergen the tide keeps no conſtant courſe, but a floud with a north-eaſt and ſouth-weſt moone maketh the higheſt water; it floweth with a daily tide five and with a floud ſix foot.

A ſouthweſt and northeaſt moone maketh higheſt water at the Bears-Iſland, the floud cometh commonly out of the ſouth-weſt and floweth toward the ſoutheaſt.

A ſouth ſouthweſt and northnortheaſt moone maketh the higheſt water on the north-eaſt corner of Hoopen-Iſland, and is floweth there as hard as in Texel: it cometh out from the ſouth ſouthweſt, & runs along the coaſt to the Cape the Kijck-uyt: the ſtream floweth from ſouthweſt north-eaſtward to Wijbbe Janſons water.

On the eaſt-ſide of the Zews-uytkijck cometh the ſtream from the ſouth, and runs to the north; it floweth eight hours and ebbes ſcarce four.

Of the Depths.

At the north-weſt-corner of the Bears-Iſland ye have fourtie fathoms, and drieth more and more up till ye be-within a canon-ſhot of land where ye have fifteen fathoms water.

Situation and Courſes.

From the North-cape to the Bears-Iſland the courſe is north north-weſt, and north-weſt weſterly 54 or 55 miles.
From Suroy to the Bears-Iſland north northweſt 50 miles.
From the Bears-Iſland to Hoopen-Iſland, north north-eaſt northerly 32 miles.
From the ſouth-weſt to the north-eaſt corner of Hopen-Iſland eaſt northeaſt 8 miles.
From the north-eaſt corner of Hoopen-Iſland, to Black-point, north weſterly 10 miles.
From the Bears-Iſland to the Cape the Uyt-kijck, north north-weſt ſomewhat weſterly 28 miles.
From the Cape the Uyt-kijck to the ſouth-end of the fore-land, north north-weſt 26 or 27 miles.
From the Cape the Uytkijck to Horn-zond north north-weſt 6 miles.
From Horn-zound to Bel-zond north weſterly and north north-weſt 7 miles.
From Belzound to Yce-zond, north weſterly 11 miles.
From the ſouth-end to the north-end of the foreland, north 15 or 16 miles.
From the north-corner of the foreland to the Danes-Iſland north-eaſt northerly 9 miles.
From Magdalene-bay to Robbe-bay, north northeaſt 2 miles.
From the Robbe-bay to the Soth-bay north north-eaſt half a mile.
From Devils-Iſland to the Vogel-ſang, eaſt north-eaſt a large mile.
From the Vogel-ſang to the Zews-Uyt-kijk, ſoutheaſt eaſterly a large mile.
From the Zews-Uyt-kijck to Moniers-bay, ſouth-eaſt half a mile.
From Moniers bay to the Red-bay the courſe is eaſt ſouth-eaſt 4 miles.
From the Red-bay tho Reene-velt eaſt ſoutheaſt 5 miles.
From Reene-velt to the Gray-corner ſoutheaſt 3 miles.
From Reene-velt to the Moffen-Iſland, north-eaſt northerly 4 miles.

Heights.

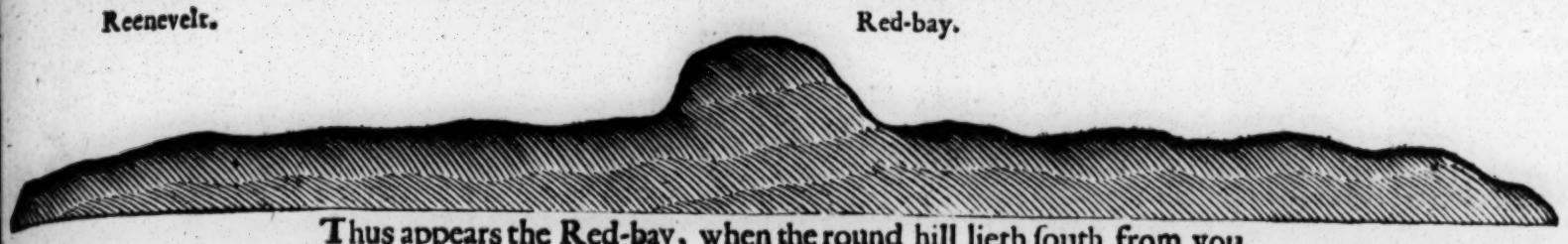
The Bears-Iſland lieth on four and ſeventie grades & a half.

The Cape the Kijck-uyt lieth on ſix & ſeventie grades and ſix and thirtie minutes.

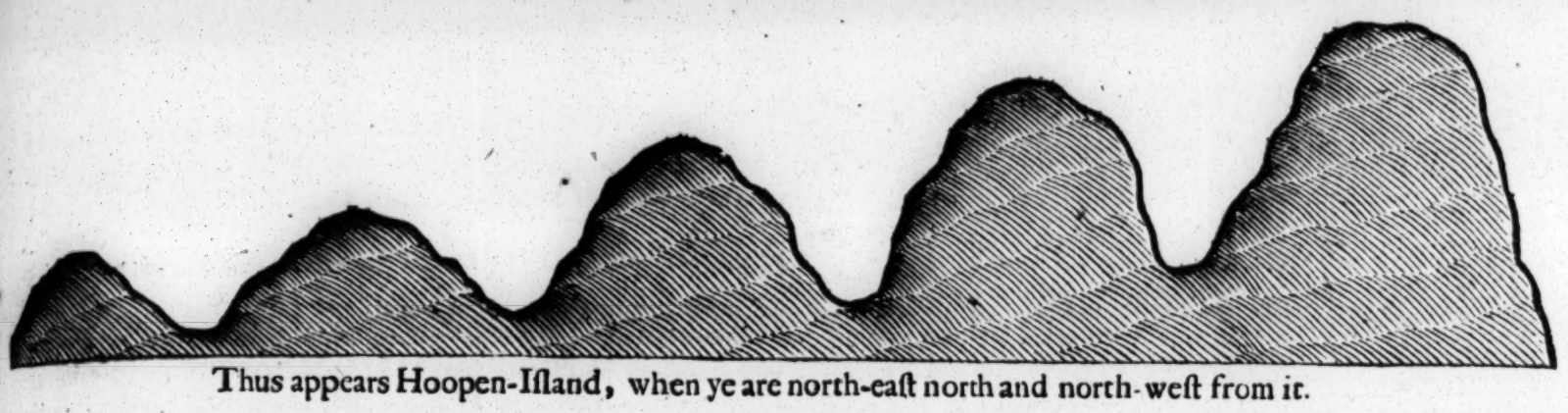
The north-corner of the Foreland lieth on nine and ſeventy grades twentie minutes.

Thus

Thus appears the land in your ſight when ye are on Sea.



Thus appears the Red-bay, when the round hill lieth ſouth from you.



Thus appears Hoopen-Iſland, when ye are north-eaſt north and north-weſt from it.

The fourth Demonſtration,

Containing

A Deſcription of Orlogenes from the Cape of Candenoes to the weſt-coaſt of Nova Sembla and the Weygat.

Cande-noes.

ORlogenoes and the cape Candenoes lieth ſeverally north & eaſt ſouthweſt 35 miles. The corner of Candenoes is well enough known; there ſtands 5 great croſſes up for tokens, which when ye come by, ye can perfectly perceive that the land fails you, on the one ſide ſouth-weſt toward the White ſea, and on the other ſide ſ. e.

Morſo-nowits.

About ten miles eaſterly from Cabo de Candenoes, there lieth an Iſland called Morſonowits, from thence eaſterly there lieth a great Inham landward in, which is a flat undeep water, with all a deceitfull ground. There hath been divers ſhips who have ſaild amiſſe here, thinking that they had been in the mouth of the White ſea, therefore it is neceſſarie to learn to diſtinguiſh the land, for the Ruſſiſh coaſt eaſtward Candenoes is very ſandie, & a flat ſhoar; and the coaſt of Lapland is high, & full of mountains. Into this Inham there runs a river from the land, through the which ye can come in boats to the White ſea.

Beſides this Inham about twentie miles e. & e. ſoutherly from Candenoes, there lieth an Iſland called Colgoya, which is ten miles in length; ye may ſail round about it, but on the ſouth-ſide thereof lieth a craig wich comes from the eaſt, that ye muſt ſhun, becauſe it joyns to the weſt-end of this Iſland. There are a great many geeſe on this Iſland, which in the ſommer time are wholly naked having no kinde of feathers; they lay their egge under their ſtump or taile & on that faſhion breeds forth their young ones: there are ſuch multitudes of thoſe geeſe there, that the Ruſſes comes with their Lodges or boats to land, and takes of them by multitudes, and ſalts them in tuns.

From the Candenoes to the Iſland Tuſſara the courſe is eaſt ſoutheaſt 32 miles, and between both lieth this great ham. On the weſt-ſide of Tuſſara lieth the corner of Swelgenoes. From Tuſſara to the river of Colcova the courſe is eaſtward five miles, that is a good river, & ſome twelve foot deep, there is no other traffique there but that the Ruſſes comes from Colmogro and S. Niclaes with their lodges to change their wares for roughs skins.

Five miles eaſtward from the river Colcova lieth the river Pitſana, which is but ſix foot deep, and is not well known, a little weſterly from this lieth a drie bank which ye muſt ſhun. Olivier Brunel coming from Nova Sembla ſat here on ground. Pitſana.

Ten miles eaſtward from Pitſana lieth the river Pitſora, that runs by the eaſt-corner in, ſouth ſouth-eaſt, and is deep ſix Holland yards: the land there is low & ſandie, on the weſt-corner theſe ſtands a Pack-houſe whereon ſtands ſome croſſes; when ye come within the river, turn a little weſtward up toward the Pack-houſe, and let anker fall on three or four fathoms woter, there is a great poole or lake. Pitſora.

Ye muſt ſhun the e. ſide of the river, for it is full of ſand & banks. The town of Pitſora lieth 26 Dutch miles landward in: there is abundance of coſtly skins and criſtall.

Between Pitſora & Way-gats lieth Oltgijn, & without on the land lieth two rocks or little Iſlands, the one called Oranjen, & the other Graef Maurits: there ye may ly at anker on ſix or ſeven fathoms. From the ſouth-ſide there comes a ſandbed off-failling, where ye have but three fathoms. On the eaſt & weſt-ſide of theſe two Iſlands there is a great Inham, flat water; the land lieth there in the round to the corner of Pitſora, all in one Inham: it is from Pitſora to Way-gats north-eaſt eaſterly 24 miles. Oltgijn.

Way-gats, which is likewiſe called the Strait of Naſſowen, is a narrow paſſage through which ye can ſail into the Tartariſh ſea. It lieth firſt eaſterly, and then north-eaſt the matter of ſix or ſeven miles, about midway there lieth an Iſland which ye can ſail by on both ſides. A little within the corner on the north-ſide is a brave bay, into the which ye can let anker fall ſo deep as ye pleaſe, to wit on five, four or three fathoms, good ſtrong ground; toward the eaſt wall ye have the deepeſt water, & ye ly there ſafe from all windes or Yce-flouds. It hath been aſſayed at two ſeverall times to finde away through this Strait, to ſail benorth Tartarie to come to the rich Kingdomes of Cathey and Chine, and from thence to Molucquen; but all in vain, becauſe of the great Yce that lieth there the whole year, and never melts, by reaſon of the conſtant cold. Way-gats. Traen-bay.

From the eaſt-end of the Strait Way-gats to the Inham of Oby, the courſe is eaſt ſouth-eaſt and ſouth-eaſt eaſterly Oby.

eaſterly rhirtie miles. On the e. ſide here of the land lieth north-eaſt thirtie miles more, to the two norther rivers, & from thence northeaſt, but how far, is not as yet known.

Nova Sembla. The weſt-coaſt of Nove Sembla lieth from W y-gat northward to Conſtint-zarck, northweſt about fourtie miles. Benorth this falls it north eaſter-ly-ward to the corner of Langerneſſe or the Staten-hoeck (or States corner) and ſo forth north northeaſt, northeaſt and eaſt north-eaſt to the Iſlands of Oranje; the northmoſt part of Nova Sembla lieth on the heighth of 77 grades and an half.

Of the Tides and flowing of Streams.

From the eaſt-ſide of Candenoes to the Iſland of Colgoyen, the ſtream fals eaſt and eaſt ſoutherly, as likewiſe along that ſame Iſland; From Colgoyen to Way-gats fals the ſtream eaſt & weſt. Alongs Nova Sembla the ſtreams turns about with the moone. Alongs Ruſland they come from between Candenoes and Pitſora out of the weſt and weſt north-weſt, and ſo runs alongs Ruſland.

The ſtreams that come to Way-gats comes from Colgoyen and Nova Sembla, and fals with the reſt eaſt northerly through the *Strait* of Way-gats to the river Oby, ſo by this means the flowing and ebbing of the ſtreams keeps the paſſages of Way-gats open, ſo that they are often without Yce, except boards of Yce that come from other places driving. But on the eaſt-ſide of Way-gats the floud comes from the north-eaſt, and falls in the Oby and Strait of Naſſow. The water flowds and ebbs there, but keeps no conſtant courſe.

Of the depths and grounds, ſo wel on the eaſt as weſt ſide of Waygats.

Along the whole coaſt from Candenoes to Way-gats, it is a flat upgoing ground, moſt ſand and faſt ground. If it be miſtie weather and if ye have eight or nine fathoms water, then ye muſt know that ye are but three or four miles from the coaſt: but if ye have 30 or 35 or 40 fathoms, then ye are far enough from land: ſo is it likewiſe alongs Nova Sembla, and over the eaſt-ſide of Way-gats, but when ye come into the mouth is grows flatter.

Of the ſituation, and how far every land lieth from another.

From Orlogenes to the Cape Candenoes the courſe is northeaſt 35 miles.
From Candenoes to the Iſland Colgoye, the courſe is eaſt ſoutherly 20 miles.
From Candenoes to *Swelgenoes*, ſouth-eaſt eaſterly 22 miles.
From Candenoes to the Iſland Morſonowits, ſouth-eaſt 10 miles.
From Candenoes to Tuſſara, eaſt ſouth-eaſt 32 miles.
From Tuſſara to Colcova, eaſt 5 miles.
From Colcova to Pitſana, eaſt northerly 5 miles.
From Pitſano to Pitſore, eaſt & eaſt northerly 10 miles.
From Pitſora to Way-gats, the courſe is about north-eaſt eaſterly 10 or 12 miles.
From Catsnoes to the Iſlands of *Solofky*, weſt a little ſoutherly 28 miles.
From Catsnoes to Warſiga, north-weſt weſterly 12 or 13 miles.
From Catsnoes to Polongi, n. w. northerly 17 miles.
From the Iſlands of Solofky to Ombay in Lapland, north 24 or 25 miles.
From *Solofky* to Warſige, eaſt north-eaſt 24 miles.
From Solofky to Polongi, northeaſt eaſterly 38 miles.
From Candenoes to Coſtintzarck in Nova Sembla north-eaſt ſomewhat eaſterly 46 miles.
From the eaſt-end of Colgoyen to Way-gats, e. 45 miles.
From Pitſora to the eaſt-end of Golgoya, weſt north-weſt 32 miles,
From the Lowland to the Stream-bay eaſt & w. 4 miles.
From the Stream-bay to Yce-havens-corner, eaſt northerly 3 miles.
From the Yce-havens-corner to the Iſland-corner the courſe is eaſt north-eaſt 5 miles.
From the Iſlands-corner to Vliſſinger-head, north-eaſt eaſterly 3 miles.
From Vliſſinger-head to the Head-corner the courſe is north-eaſt 4 miles.
From the Head-corner to the corner of Begeerten, (or deſire) ſouth and north 6 miles.
From the corner of Begeerten to the Iſland of Oranjen, north-weſt 8 miles.
From the Iſlands of Oranjen to the Yce-corner, weſt and ſouthweſt 5 miles.
From the Yce-corner to the Cape the Trooſt (or comfort) weſt and weſt ſoutherly 25 miles.
From the Cape thee Trooſt to the Cape Naſſow, weſt northerly 10 miles.
From the Cape Naſſow to the e. end of the Croſſe-Iſland, weſt northerly 8 miles.
From the eaſt-end of Croſſe-Iſland to Wilhelms-Iſland, weſt ſoutherly 3 miles.
From Wilhelms-Iſland to the Black-corner, w. ſouthweſt 6 miles.
From the Black-corner to the Eaſt-end of the Admiraliteyts Iſland, weſt ſouth-weſt 7 miles.
From the Eaſt-corner to the Weſt-corner of the Admiraliteyts-Iſland weſt ſouth-weſt 5 miles.
From the Weſt-corner of the Admiraliteyts-Iſland to the Capo de Plancio ſouth-weſt weſterly 10 miles.
From the Cape to Plancio to Lomſbay, weſt ſouth-weſt 8 miles.
From Lomſbay to the Staten (or *States*) corner, w. ſouth-weſt 10 miles.
From the States-corner to Langeneſſe, ſ. w. ſoutherly 14 miles.
From Langeneſſe to the Capo de Cant ſouth-weſt ſoutherly 6 miles,
From the Capo de cant to the corner of the Black-rock, ſouth weſterly 4 miles.
From the corner of the Black-rock to the Black Iſland, ſouth ſouth-eaſt 3 miles.
From the Black Iſland to Conſtintzarck, eaſt and weſt 2 miles.
From Conſtintzarck to the Croſſe-corner, ſouth ſouth-e. 5 miles.
From the Croſſe-corner to S. Laurence-bay, ſouth-e 6 miles.
From *S.* Lanrence-bay to Meel-haven, ſouth ſouth-eaſt 6 miles.
From the Meel-haven to the two Iſlands, ſouth ſouth-e, 16 miles.

Heights.

The Cape of Candenoes lieth on 69 grades 30 minut.
I. Colgya on 69 grades 10 minutes.
The rivers of Colcova, Pitſana, and Pitſora, lieth on 68 grades 40 minutes.
Way-gats or the *Strait* of Naſſow lieth on 69 grades 43 minutes.
The North-corner, which lieth moſt northward of Nova Sembla, lieth on 77 grades 30 minutes.

Duytsche mylen 15 in een graat

Spaensche mylen 17½ in een graat

Eng. en Fra. mylen 20 in een graat

Noordt bodem

Stockholm

Nycopen

Noordcopen

Zuyder copen

Landsorts Rif

Dammyer gat

Copersteen

Goosen sant

Salf mr tyn

Faro sond

Wisbuy

Oosterzaerde

Noorder Oorden

Zuyder Oorden

Calmer

Schenckens

Oelandt

Borgholm

Brewers Rif

Dantzigk

Ru: gen

Stetin

DENEMARCKEN.

SVERIGE

GOTLANDT

POMEREN

PRVYS

O O S T F I N S E D T

L I F L A N D T.

Wyborg

Revel

Narva

Ryga

Pascaarte
vande
OOST-ZEE
Van 't Eylandt Rugen.
ofte Bornholm tot aen
Wyborg.

T' AMSTERDAM.

By Pieter Goos Plaetsnijder op 't
water in De Vergulde Zee-
Spiegel. Anno 1665.

De Cuſten van
DENEMARCKEN en SWEDEN,
van Valſterbon tot Schenckenes, als meede
de Cuſten van POMEREN, van 't
Eylandt Rugen tot Rijgshooft.

DENEMARCK

Elsenborg

Boerenkrgt

Ahuys

Malmoren

Hammen

SCHONEN

Somerhuus

Oud Valſterbon

Valſterbon

Drelborgh

Blecker

Wyse

Gooſbeen

Santhamer

Meun

Born

holm

Bronwers Rif

Deenabſch

RV

Berg

GEN

Barus

Struelſund

Gryphswalde

Wolgaſt

Slot

P O

M

Gotlandt

Calmer

Zuyderdyp van Oolandt

Hofmes grunt

Bercker harm

Christianopolis

Groen Eylandt

Zuyderoorden

Reefcol

Ter Stolp

Ryswoldt

Wolfacken

Lyba

Sernevyße

Ryshooft

Evershooft

Reewolde

De Vlieter

Cosslin

Kolbergen

C A S S V B E N

R E V A

Duytsche mylen 15 in een grandt

Spaensche mylen 17½ in een grandt

The first part of the New LIGHTNING SEA COLUMNE, OR SEA-MIRROUR.

THE THIRD BOOKE,
Of the
EASTERNE NAVIGATION,
Containing
The Deſcription of the whole Eaſt-Sea.

The firſt Demonſtration,

Where in
Are deſcribed the Sea-Coaſtes of Falſterborn to Schenckenes, and from the Iſland Rugen to Ryghs-head.

Elburgh.

HOw men ſhall ſayle about the riffe off Falſterborn hath been here before rehearſed. The coaſt from Falſterborn eaſtwards lyeth moſt eaſt and by north. Firſt from Falſterborn to Elburgh are three leagues. If you will anchor before Elburgh, then bring the Cloyſter and the Church within a fathom or a fathom and a half nea, one to the other, and ſayle ſo right in unto the town, you may anchor by it in 4, 3 or 2 fathom and a halfe.

Uytſtee.

From Elburgh to Uytſtede are 7 or 8 leagues. Betwixt them both about 3 leagues to the eaſtwards of Elburgh, and 5 leagues to the weſtwards of Uytſtee is a poynt, off from which lyeth a ſhoale, come no nearer it then 8 or 9 fathom. Uytſtee lyeth in a bight, and hath a high ſharp ſteeple. If you be bound thither, then bring the ſteeple north from you, and then ſayle in right with it towards the ſtrand; there ſtandeth a red tiled houſe to the eaſtwards of the bridge, bring that houſe and the end of the bridge one in the other, and ſayle in ſo, and runne to the weſtwardes of the bridge, anchor there in 3 fathom, or two foot leſſe, there is cleane ſand-ground. When you come from the weſt, and are paſt that foreſayd ſhoale then you may boldly runne alongſt by the ſhoare in 3 fathom & an half, without feare.

Goesbeer.

Three leagues to the eaſtwards of Uytſtee lyeth a high poynt called Goeſſebeer, from thence to Sandhammer is a league.

Sandhammer.

From the poynt of Goeſſebeer runneth of a great ſhoale farre to ſeawards, and lyeth alongſt the coaſt, unto neare Sandhammer, you may ſound it in ſix, eight, and ten fathom, as you will. When you runne over it in tenne fathom, then lyeth the north-end of Bruntholm about eaſt & by ſouth from you, and the poynt of Sandhammer north. Under the Sandhammer is good anchoring for a weſt, weſtſouthweſt, weſtnorthweſt, & northweſt winde, in five or ſixe fathom. When you come out of the northeaſt, you may runne along by this coaſt, with a northweſt winde, in 7, 8, 9, or 12 fathom, untill paſt Goeſbeer, for to avoyd Bruntholm.

The point of Goeſbeer and the north end of Bruntholm lye northweſt and by weſt and ſoutheaſt & by eaſt about five leagues aſunder, but Uytſtee and the foreſayd north end of Bruntholm lyeth weſtnorthweſt & eaſtſoutheaſt 9 leagues aſunder.

For to ſayle from Falſterborne about to the northwards of Bruntholme you muſt go on eaſt, ſo long untill that you have the length of Uytſtee, then forth eaſt and by north, and then you ſhall ſayle yet neer enough to the point and ſhoale of Goeſbeer, come no near it then ſeven or eight fathom. But to ſayle from Falſterborn to the ſouthwards of Brontholm, the courſe is eaſt and by ſouth ſomewhat ſoutherly two and twenty or three and twenty leagues, and alongſt the ſouth ſide of Brontholme eaſtſoutheaſt.

Brontholm.

The Iſland Brontholm is clean round about, except on the ſoutheaſt point, there runneth off a foule riffe, called Brewers rif, which men muſt avoyd. On the northeaſt ſide you may runne alongſt by it upon your lead, without doing amiſſe, in 12 or 13 fathom, & alongſt the ſouthweſt ſide in 8 or 9 fathom.

Roade under Brontholm.

Men may anchor round about Brontholm, at divers places, as before Rottum, & to the northwards, before the caſtle, thwart of Santwick, Suaux and Nex.

Rottum.

Before the Village, betwixt Rottum, & the caſtle that ſtandeth upon the northweſt poynt, is good anchoring for an eaſt or northeaſt winde, in thirteen, fourteen, and fifteen fathom, but not verie cleane ground.

Thwart of the Caſtle it is good lying for an eaſtnortheaſt, eaſt, & eaſtſoutheaſt winde in 18 & 20, & alſo 14 & 15 fathom, ſand ground, but nearer the ſhoare the ground is not verie cleane, the nearer to the ſhoare the fouler ground.

Sandwick.

Under the northweſt poynt before Sandwick there is good anchoring for ſouthweſt windes, and you may come neare unto that poynt. From the northweſt poynt to the other poynt the ſhoare lyeth eaſtſoutheaſt and weſt, northweſt.

Nex.

On the eaſt ſide is good anchoring before Suaux and Nex: but before Nex it is not verie clean. By Nex runneth off a little riffe from the ſhoare, which is ſteepe on both ſides: but if you come no nearer it then in tenne fathom, you can take no hurt off it: to the northwardes of Nex

lyeth alſo a great rock. He that will anchor before Nex, let him anchor ſo that the flat ſteeple which ſtandeth above Nex, doe ſtand betwixt the w. & w. & by ſ. from him, and that the north poynt bee north and by weſt, & the ſouth poynt be ſouthſouthweſt from him, there it is two and twenty fathom deep, and cleane ſand-ground. At many other places it is otherwiſe ſtonie and rough ground, with ſouthweſt & weſt winds you have there a wather ſhoare.

The Eertholmes lye from the north-end off Bruntholm eaſt and by north and weſt & by ſouth three leagues aſunder, and from the ſoutheaſt end ſouth and north five leagues. In the Eertholms is a little Haven, but by reaſon that it is not uſed it is unknowne.

Shoale by Bruntholm. Betwixt the north poynt of Bruntholm & the point of Sand-hammer, but neareſt to Bruntholm lyeth a ſhoare of ſix fathom, where ſometimes Fiſhermen doe lye to fiſh it is not verie great, but hard ſtonie ground.

From Sandhammer the coaſt lyeth northnortheaſt and north and by eaſt two leagues to Somer-haven, this is a round bay, within it is very good anchor ground. From thence the coaſt lyeth about north 6 leagues unto Ahuys. From the north poynt of Bruntholm to Ahuys, the courſe it north ſomewhat weſterly about 13 or 14 leagues. But to Hanno, north and by eaſt 13 or 14 leagues.

Ahuys lyeth upon a river, where ſometimes is before the towne 10, or 11, and ſometimes alſo no more then 4 or 5 foot water, according as the water commeth off out of the land, upon it is a great fiſhing, where in the ſommer time are great ſtore of good Els taken. To the eaſtwardes of the mouth of the River runneth off a ſtony flat from the ſhoare, and to the ſouthwards of the river a foule ſtony riffe, right off from the ſhoare alongſt by the foreſayd flat, ſo that there lyeth in a channell betwixt the foreſayd flat, and riffe, which is called the Eaſtergat.

Through this foreſayd riffe lyeth in a channell untill into the Eaſtergat, on againſt the flatte, which is called the Southergat. If you will ſail into this ſouthergat, comming from the ſouthwards, then runne to the weſt ſhoare to the ſouthwards of Ahuys, untill you come in 5 or 6 fathoms, and then you ſhall ſee upon the north ſhoare, north and by weſt or ſomewhat more weſterly from you, a cape or beacon ſtanding a little from the ſtrand within the land, of faſhion like a mill without wings: Bring this beacon to the weſt ſide of the high Hill, which lyeth ſomewhat further into the Land, to wit, even in the going of the higheſt of the hill, keepe theſe markes ſo ſtanding, and ſail in right with them, untill that Ahuys commeth over that tree, which ſtandeth there at the north end of the wood; or that the white Countrie-church come to the northwards of the little houſes of Ahuys, then goe on northweſt, or bring that foreſayd white-countrie-church in a little valley, a little to the northwards of an old ruined caſtle, where of there ſtandeth yet ſome of the walls upon the north ſide of the River, and ſail ſo on, untill that Ahuys come to ſtand in the middeſt of the River, anchor there in two fathom and an halfe, or three fathom, there is the roade, there can goe no ſea. In this ſouthergat it is two fathom, two fathom and an half, and ſometimes alſo at leaſt 3 fathom deep.

Eaſtergat. For to ſayle into the Eaſtergat, comming from the ſouthwards keepe in ſixe or ſeven fathom, and runne ſo to the north ſhoare, and then you runne alongſt without the riffe, that lyeth of by ſouth the rivers mouth from the weſt ſhoare, untill that Ahuys doe ſtand right weſt Ahuys. from you, then there commeth a great tree to the wood, that ſtandeth upon the weſt ſhoare, keepe that ſo ſtanding & runne in right with it, untill that the foreſayd countrie-church come to that aforeſaid old peece of wall, of the old ruinouts caſtle, and then right in, as hath beene before ſaid. Or runne in the firſt markes, untill within a ſhot of a caſt peece neer to the weſt ſhoare, and then edge up to the north ſhoare, untill that Ahuys come in the middeſt of the River, and anchor there, as hath been ſaid.

Hanno is a high round Iſland, which men may ſayle round about, under it is good road for ſouth and ſouth-eaſt windes. Hanno.

Behind Hanno runneth up a little River to Selſbrough but ſerweth onely for ſmal ſhippes or Crayes, which go not deepe.

From Ahuys to the Rockes the courſe is eaſt and by ſouth twelve or thirteene leagues, betwixt them both lye divers little townes, as Fleholme and Rottenbuy, where men may anchor before, in ſixe, ſeven, and eight fathom good anchor ground: And other Havens more, but little or nothing knowne by Hollanders. Thwart of Rottenbuye lyeth a little Rocke ſomewhat of from the land, called Malqueren, under which men may alſo ride. Fleholm. Rottenbuy.

From the north poynt of Bruntholm to the Rocks the courſe is northeaſt ſomewhat northerly ſixteen leagues, but from the poynt of Sandhammer eaſtnortheaſt ſixteen leagues. If you runne alongſt cloſe by the north poynt of Bruntholm, you ſhall runne with a north waye, alongſt even without the Rocks: But if you runne alongſt cloſe by the poynt of Sandhammer, & will ſaile from thence to the Rockes, you ſhall with a northeaſt and by eaſt waye fall with the land even within them, or to the Weſtwardes of them.

The rocks are ſome little rocks together, wich men may ſayle round about, but can have no Roade under them; they lye 3 or 4 leagues diſtant from the maine land, & are ſmaller then the Eartholms. The rocks.

A leagues or two to the northwards of them lyeth the Vrouwen of Greene Iſland, by ſome called the Rough-Iſland, and alſo the Outlyers: It is not ſo brooken in it ſelfe as the Rocks, and alſo much greater, off to ſeawards from it, lye ſome rocks, to the weſtwards of it, it is all full of rocks, ſome above and ſome under water alongſt even faſt to the Land, you may ſaile about within the Greene-Iſland betwixt it and the rockes, but no man can doe it, but the muſt be verie well acquainted there, and then alſo not without great daunger. To the ſ. wards of it you may alſo finde Road at ſome places, but you muſt be verie wel acquainted, and alſo not without daunger, by reaſon of the multitude of ſuncken rocks and ſharp ground. The eaſt ſide of the Outlyers lye from the rocks northeaſt and by north. The ſouth end of Oeland is a ſharpe point, and lyeth from the rocks eaſt and weſt about ten leagues diſtant. Thwart of it, betwixt the maine land and the aforeſayd ſouth poynt of Oeland, it is about four leagues broad, betwixt them both goeth in the Calmer-ſound. Oeland.

For to ſayle up into the Calmer ſound, then goe on from the rockes, or from the Outlyers northeaſt, and by eaſt and then you runne in betwixt Oeland & the maine land upon 14 fathom, and ſayle then northnortheaſt betwixt them both, a middeſt the channell, both the ſhoares are verie foule: but if you come not nearer them then in 7 fathom, you can take no hurt there.

From the Rocks to Calmer are ſixteen leagues: About halfe wayes betwixt them, northweſt from Southerorden the ſouthermoſt poynt of Oeland lyeth the towne of Chriſtianopell, lately built there upon a little Iſland by the Kings Majeſtie of Denmarke, and ſo called after his name. Thwart of it was wont to lye upon the maine land a little towne called Overſchare, now it is one with Chriſtianopel, thwart of it lyeth a ledge of rockes about a great Engliſh mile of from the ſhoare ſoutheaſt into the ſea, come no near it then in then fathom. Chriſtianopell. Overſchare.

At Chriſtianopel is a haven on the eaſt ſide, from it lyeth of a riffe towards the eaſtnortheaſt into ſea; there fore he that will ſayle in there muſt come in from the northwards for to avoyde this riffe.

To the northwardes of Chriſtianopel towardes Calmer, it is on both ſides (as well on the ſide of the maine land, as on the ſide of Oeland) all full of rocks and foule gronnds, but you may ſound both the ſhoares: in the middeſt betwixt both in the farewaye, it is tenne and twelve fathom deep, all ſoft claye ground, to the ſouth-

wards

wards of Chriſtianopel it is deeper, but to the northwards of Calmer it is by little and little ſhoaler.

Berckerhaven. Two leagues to the northwards of Chriſtantinopell lyeth Berckerhaven, there men doe lade oaken beams, there within it is good lying, but verie bad for to come in or out, becauſe of the multitude of ſuncken rocks, and other foule grounds, which lye before it, about a half league off from the ſhoare to ſeawards.

Hofmes ground. About a league to the northwards of Berckerhaven lyeth Hoſmes ground, which is a very bad foule ground lying ſomewhat farther off from the ſhoare to ſea-wards, then the other rocks which lye alongſt the ſhoare, there of you muſt take heede.

Steenſoe. About a league to the ſouthwards of Calmer, and two leagues to the northwards of Hoſmes ground, lyeth a poynt called Steenſoe, which is a ſomewhat high rough and very foule poynt, a halfe league long, lying within, a halfe league neare to the towne, to the weſtwards of it runneth in a great bight, where is good lying alſo for manie ſhipps, but you cannot come in there, becauſe of the manie foule grounds and dangers, except it be with a very skilfull Pilot: upon the weſt ſide, over againſt the poynt ſtandeth a white houſe. The King of Denmarks fleet of ſhips laye there, in the time of the laſt ſiege of Calmer.

Caſtle of Calmer. When you come ſo farre in, that you leeſe the ſouth end of Oeland out of your ſight, then you get the Caſtle of Calmer in ſight, ſayle towards it but ſhunne the ſhoares, as hath been ſayde here before. The Caſtle hath four great towers, when the two eaſtermoſt of the four come one in the other, then is the Caſtle about northweſt from you, then you come by the Grimſchaer, this Grimſchaer. is a rock eaſy to be knowne, upon it ſtandeth a maſt, with a Barrell upon the toppe of it, which lyeth much nearer the weſt ſhoare then Oeland, when you get it in ſight, then ſayle towards it. Thwart of the Grimſchaer or Tonholm lyeth a ſuncken rock, about a cables length of from it, and a little more to the eaſtwards, upon it is no more then five foot water.

The farewaye is through, betwixt this ſunken rock & the Grimſchaer about northeaſt and by north, ſayle cloſe alongſt by the Grimſchaer, leaving it on the larboard ſide, and then the foreſayd ſunken Rock remaineth on the ſtarboard ſide of you.

Being a little paſt the foreſayd ſunken Rock, & Grimſchaer, you come then on againſt the weſt end of a long ſmall rock, which lieth farr to the eaſtwards, towards Oeland, and lieth almoſt even with the water, at ſome places a little above water, and at ſome places the Sea runneth alongſt over it, edge then a little up to the northwards, and runne about by the poynt of that rock; Being paſt that, you ſhall meet on the larboard ſide a low rock, from the which there ſhooteth of a little tayle to the northwards, upon it ſtandeth a little beacon, ſayle alongſt by it, and being a little paſt it, then ſhall the Town lye weſtſouthweſt from you, let your anchor fall there in five or ſixe fathom, there is the right road. If you come to anchor ſomewhat northerly in the roade, you muſt be carefull to take heed of a ſunken rock which lyeth not more then eleven or twelve foot under water.

Sunken rock. The Marks of this ſunken rock are theſe: When the mills upon the Mulholm are one in the other, with the mill which ſtandeth on the north ſide without the town, then you are thwart of the foreſayd ſunken rock; On both ſides of it, as well to the northwards as the ſouthwards of it, it is deep enough. It is good lying there, allmoſt with all windes, but a north and by eaſt winde is the worſt, which bloweth there open in. With ſhipps that go not deeper then ſixe or ſeven foote, men may come to lye at the bridge before the towne.

You may alſo ſayle to the weſtwards of the Grimſchaer: that is, trough betwixt the Grimſchaer and the land, with ſhipps that go not deep, but he that ſhall doe it, muſt be verie well acquainted there, for there it is all full of Rocks, ſome above and ſome under water.

From the ſouth end of Oeland, called Southerorden, lyeth of a great dangerous riffe a league and an half into ſea, there it is ſeven and eight fathom deep, when the Chappel upon Southerorden is northweſt a great league from you, there it is tenne and eleven fathom deepe; you may ſound abouth this riffe in eight or nine fathom, but it is not good to come nearer it, when you can doe otherwiſe, and can paſſe it. The riff of ſouth-erorden.

A halfe league to the northwards of the Towne Calmer, to wirh, a little to the northwards of the road, lyeth an Iſland, called Skalloe, which you muſt leave on the ſtarboard ſide, when you are bound from Calmer to the northwards: It is indifferent cleane upon the weſt ſide, but from the Sweeds ſide there over againſt it runneth of a ſtone rif, almoſt unto the Iſland. Upon this rifte ſtandeth commonly a ſtone-beacon: it is dangerous to ſayle trough there, or over that ſhoale, for one that is not there very well aquinted: It is alſo Pilots water. Skal-loe.

Foure leagues to the northwards of the Calmer, on the Sweeds ſide, lyeth an out poynt, called Schenknes. or Skegneſſe, thwart of it lyeth a ſmall Iſland, called the Baker, betwixt this poynt and Skallo it is very uneven of depths. Skege-nes. The Baker.

The eaſt coaſt of Oeland is a cleane coaſt, & lieth northnortheaſt, and ſouthſouthweſt.

Of the Iſland Rugen.

To the weſtwards of the Iſland Rugen men doe ſayle up into the Jelle unto Straelſound. For to ſayl from Straelſount out alongſt the Jelle, goe on north, and north, and by weſt, there lyeth a middle-ground, ſometimes there ſtandeth a beacon upon it, and ſometimes not, leave that on the larboard ſide, being paſt that, ſayle to the poynt where the wood ſtandeth upon, ſo that the Town come behind the wood, you ſhall then ſee a verie high tree, bring that over the flatteſt ſteeple, and keep it ſo a while ſtanding, going on ſtill north, and north and by weſt unto the beacon the Jelle. When as you luffe up about by it weſt, then looke out for two trees, which ſtand upon the eaſt ſhoare, ſomewhat within the land, bring them a ſhips length without the higheſt tree, which ſtandeth upon the ſhoare, & luffe about the beacon, towards the buye. In the mouth of the deepe lye three buyes, which in ſayling out you muſt leave all on the larboard ſide, but in ſayling in all on the ſtarboard ſide. It is not deeper in the mouth of the Deepe then ſixe & ſeven foot, and alſo without, it is farre of ſhoale water. For to ſail out at the Jelle.

The Iſland Rugen hath four poynts that lye out, under which men may ride at divers places, as Doornboſh, Whitmond, Jaſmond and the Peert.

The poynt of Doornboſh lyeth from the Jelle north diſtant two leagues, it is high land with a ſteepe poynt, men may ride under it for northeaſt, eaſt, and ſoutheaſt windes. If you will anchor there, then anchor in three, four, or five fathom, ſo that the ſteepe point ſtand northnortheaſt from you, or that the Church ſtand over the poynt, or anchor where about that it ſhall pleaſe you, or ſhall be beſt convenient, it is there all over ſhallow water and clean ſand-ground. Dornboſch.

From Dornboſch to Brontholm, the courſe is eaſtnortheaſt ſeventeen or eighteen leagues, but Dornboſch and Faſterbornes Riffe lye northnorthweſt and ſouthſouthweaſt, fourteen leagues aſunder.

From Dornboſch to Whitmont, the courſe is northeaſt & by eaſt four leagues. Betwixt them both goeth in a greate Bay, where you may run in alongſt by Whitmont, and have road there in five or ſix fathom, for ſouthweſt, ſouth, & alſo for an eaſt winde.

If you will ſeeke roade under Whitmont for weſterly windes, and runne about by the poynt comming from the weſtwards, then come not nearer the poynt, then ſeven or eight fathom, there ſhoteth off an uneven ſhoale, which you muſt avoid, being come about the poynt, anchor there in twelve, thirteen, or fourteene fathom, Roade under Whitmont.

that is about a league from the ſhoare, nearer to the ſhoare in ſeven, eight or ten fathom, the ground is not cleane, in twelve fathom you have groſſe ſand, in thirteene or fourteene fathom ſoft ground, ſo that with harde winds you ſhould need to ſhoe your anchor, you lye there alſo landlockt for a weſt and ſouth winde.

Roade under Jaſmond.

Jaſmond lyeth from Witmond eaſtſoutheaſt diſtant three leagus.

If you will anchor under Jaſmond, for a weſt or weſtnorthweſt wind, then ſayle ſo far about the poynt, that it come to be northnorthweſt; or ſomewhat more northerly from you, when you come about the poynt, you ſhall ſee in the ſouthweſt or ſomewhat more weſterly from you, a little thick wood of trees, upon a plain hill, and on each ſide of that little wood, a little ſharpe ſteeple, and alſo a great tree, like as if it were a mill without wings, when that tree commeth to bé ſouthweſt and by weſt from you; anchor there in 9 or 10 fathom, there is indifferent ground, according as the ground is there, by the poynt of the land, it is about 13 fathom deep.

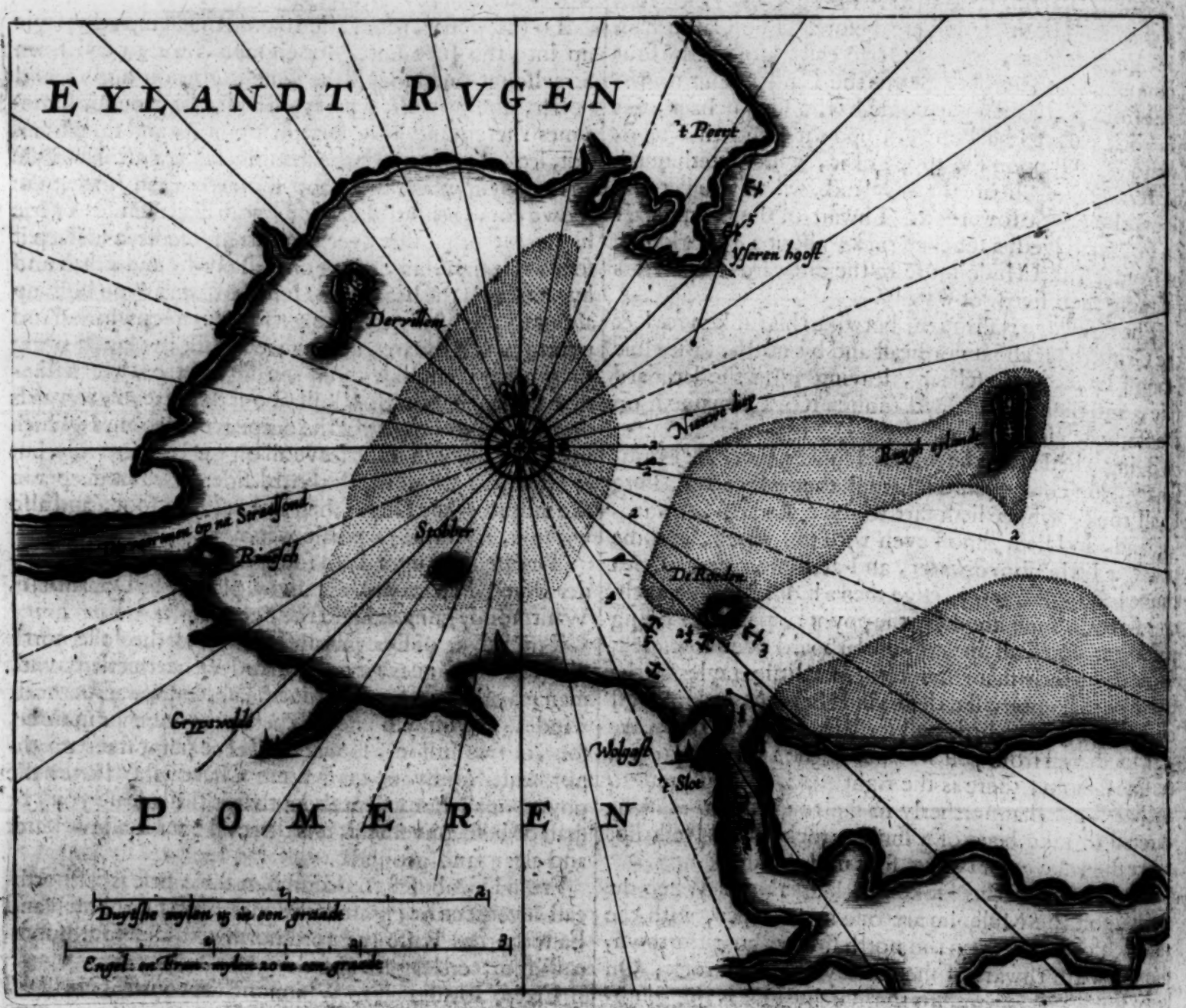
Or bring the north poynt northweſt, and the other poynt ſouthweſt and by ſouth from you, & anchor there in ten or eleven fathom, there it is good ſoft ground, but it laſteth not long, ſo ſoone as you finde the ſoft ground you muſt let fall your anchor, for the ground is there at manie places not cleane, or you muſt ſayle farre about both the poynts, there you lye landlockt for a northweſt and north winde, in tenne, eleven or twelve fathom, good ſoft ground.

The Peert, which men doe alſo call the great Buck upon Jaſmond is a tuffe of trees or two, and is a poynt that lyeth out with two poynts, where is betwixt them both a faire Sand-bay, where in is good lying in foure or five fathom clean ground. The Peert.

Jaſmond and the Peert lye ſouthſoutheaſt and northnorthweſt diſtant four or five leagues.

To the ſouthwards of the Peert goeth in that New-deep, where men doe ſayle through to Statyn.

THE NEW-DEEPE.



For to ſail into the New-deep.

About a league ſouth, ſomewhat weſterly from the Peert lyeth a poynt, called the Ironhead, there lyeth off a little riffe, therefore you muſt runne alongſt ſomewhat without that poynt, and being a little paſt that poynt, you can ſee the outermoſt buy of the New-deep, where in lye two buyes in the middeſt of the deepe, ſo that you may ſayle alongſt on both ſides of the buyes, but with ſhipps of great draughts, you muſt run cloſe along to the e. wards of the buyes, there is the very deepeſt of the channell. By the outermoſt buye it is at the ſhoaleſt, there is the barre, commonly there is 11 foot water, or a little more then 11 foot and a half, and ſometimes alſo well 12 foot, but in the middeſt of the Mouth of the deep it is commonly ſtill 12 foot, and ſometimes more.

Upon

Upon the Peert lye three high hommocks, the westermost of them is the greateſt, one great round hommock, when you keep that right without the Iron head, and then run on ſouthſouthweſt then you cannot ſayle amiſſe, although there were no buyes in the mouth of the Deep.

When you come over the Barre, you ſhall finde againe 4 or 5 fathom depth, being a little over it, you muſt go on ſoutheaſt nnto the entrance of the Peen, with that courſe you leave the Iſland of the Roeden lying at leaſt two cables lengths on the larboard ſide, It is there all over good anchoring. Right over againſt Grijpſwald lyeth a little Iſland called Stobber, round about which you may allmoſt ſayle ſomething more eaſterly then Grijpswald lyeth a little riffe thwart from the ſhoare.

If you will ſayle into the Peen you ſhall eſpie (ſailing thus right out a head at the eaſt ſide of the Peen, two poynts, keep the eaſtermoſt a handſpikes length without the weſtermoſt (for to avoyd a ſtonie ſhoale, which runneth off from the weſt poynt of the Peen) untill that you come before the Peen. Upon the eaſt ſhoare ſtand 2 beakons, bring them one in the other, & run ſo into the Peen, wich lyeth in firſt ſ. w. but in the comming in, there is no more then ſix foot; or ſix foot & an half water.

If you will anchor under the Iſland the Roeden, you muſt be mindfull of a little riffe that lyeth of from the Roeden to the ſ. wards. towards the maine land, anchor there, either to the weſtwards or to the eaſtwards of it, according as the wind ſhall bee, in 3 fathom, or 2 fathom and a halfe, ſo ſhoale or deepe, as you pleaſe, there is the common roade for the ſhips.

The Rough Iſland lyeth from the Roeden northeaſt and by eaſt diſtant about two great leagues.

About eaſtnortheaſt from the Roeden lyeth alſo a channell into the Sea, a little to the ſouthwards of the Rough Iſland, that is good for to runne out with weſterly winds, when you cannot come out at the New deepe, and alſo for thoſe that are bound to Danſke, or to the eaſtwards. From the Rough Iſland lyeth off a little riffe to the ſouthwards, which you muſt avoyd, and runne through betwixt that and the ſhoale which runneth from the ſhoare, thwart off it is the barre or ſhoaleſt of this channell not leſſe then eleven or twelve foot water, that is a ſhort out let, being over you ſhall get preſently deeper water. This channell is Pilots water. Upon the Iſland the Roeden dwell Pilots, which doe bring out ſhippes. The Coaſt of Pomeren lyeth from the New deepe to Colbergen eaſt and weſt about ſixteen or ſeventeen leagues.

Betwixt them both lye yet two channells, the Swinne, and the channell of Camin. The Swin lyeth ſeven leagues eaſtwards from the New-deepe, which runneth through a little River into the Haff or broade water, right over againſt the river of Stetyn. Camin lyeth five leagues to the eaſtwards off the Swin, upon the eaſt end off the Haff or broad water of Stetyn: that channell goeth through alſo with a river into the Haff

Five leagues without the land, when Jaſmond is weſtnorthweſt, or there about, the Peert weſtſouthweſt, and Rough Iſland ſouth from you, there lyeth a banck of ſeven fathom, upon one place ſomewhat leſſe, and upon an other ſomewhat more, betwixt it and the land towards Jaſmond it is again thirteen, fourteen and ſifteen fathom deep, but to the eaſtwards of the Newdeepe, alongſt by the coaſt of Pomeren, it is all ſhoale water, of foure, five, ſixe and ſeven fathom, ſo farre into the Sea, that when you can but even ſee the land of the Swin, there it is not deeper then ſeven or eight fathom, without ſight of the land it is twelve & thirteen fathom deep.

The Haven of Colbergen you muſt ſayle into between two heads, untill you come before the Towne. Within in the river, right over againſt the Town, lyeth a Well or Brook which can give all the countrey there about Salt, of water which they ſeeth, and yet the water of the river is freſh as Milk, for it is a little water that commeth out of the land. The Coaſt of Pomerland lyeth from Colbergen to Garſhead northeaſt & by eaſt & ſouthweſt and by weſt about 13 leagues, betwixt them both lye two havens more, to witt, Coſlyn and Ruwolde.

The haven of Coſlyn lyeth from Colbergen eaſtnortheaſt 3 leagues diſtant. And from Coſlyn to Ruwold, the courſe is northeaſt and by eaſt five leagues. Into the haven of Ruwold, or the little river, called the Wipper, an indifferent ſhip may go in, It is from Ruwolde to Garſhead northeaſt & by eaſt four leagues. Coſlyn Ruwolde.

The land lyeth from Garſhead to the Roſchead eaſt and eaſt and by north 20 or 21 leagues, betwixt them lye the havens of Stolp, Liba, and Sernevis.

A little to the eaſtwards of Garſhead lyeth the haven of the Stolp, which is a river ſo called as the Towne, which runneth up to the ſame Towne, onely for ſmall ſhipps, although that there doe indifferent great ſhips lade. The Stolp.

From Garſhead unto Reefcoll it is all a white ſtrand, and lyeth eaſtnortheaſt from it foure leagues. Reefcoll is a high round hill very eaſy to beknowe, when you come off from Brontholm. From Reefcoll to Liba it is ſeven leagues. Liba.

Liba lyeth upon a great river, called the Oſſe. From Liba to Sernevis are five leagues, betwixt them lye the three Woolſacks, which are three black tuffes of trees, where by this land is very eaſy to beknowe, a little to the eaſtwards of theſe three little Hommocks lyeth a long hill which doth ſhew it ſelfe (when you come out of the weſt) on the weſt end divided into three or foure little hommocks. Seven or eight leagues to the eaſtwards of the Woolſacks followeth the high land of Roſe-head, which is very ſteep upon the water ſide. Betwixt the Roſe-head and Reefcol it is all white ſtrand, and moſt of the land grown with trees. Sernevis.

Servenis is a little Towne lying upon a little off water which with a little river runneth into the Sea, but within, it doth ſpread it ſelfe into a great river. It is from Sernevis to the Roſe-head 4 leagues. Sernevis.

You may ſound about the Roſe-head in 15 and 20 fathom, and alſo you may well anchor under the Roſehead, there is better ground then under the Heel. All the ſtrand of Pomer-land is alongſt the Sea ſide above all black with trees.

Of the Depths

In the fareway to the northwards off Brontholm alongſt to Rye, it is deepe betwixt Oeland and Brontholm five and thirty, ſixe and thirty, and eight and thirty fathom, but comming againſt Oeland, ſo that the ſouth end come to be northweſt and by north, northweſt, and northweſt and by weſt five or ſixe leagues from you, there you ſhall finde very uneven grounds. Southeaſt five or ſixe leagues from Southerorden, are grounds of nine, tenne, twelve and ſixteen fathom, in the nine & tenne fathom ſoft ground, that there remaineth nothing upon the lead, but in the fourtheen or fifteen fathom, it is groſſe redde and black ſtonie ſand ground, almoſt like Iett. Nearer againe to Oeland it is againe deeper water and farther from the land it is alſo deeper, but all uneven ground; the ſouth end of Oeland, being about northnorthweſt from you eight leagues, there it is againe ſometimes twenty, fourteen and alſo well tenne and nine fathom in the ſhoaleſt deep, all ſtonie ground, that there remaineth nothing upon the lead, but in twenty and five and twenty fathom groſſe redd and black ſtonie ſand. He that ſayleth with a northerly wind over theſe foreſayd ſhoales, of ten, eleven and twelve fathom, and is bound to Brontholm, let him goe on weſtſouthweſt, for to ſayle clear of Brontholm, if he reckon to come againſt it by night: the Bleeckſehe ſide he may boldly runne to by the lead in ſeventeene and eighteene fathom. The poynt of Sand-hammer runneth

farr

farr off flat, as hath been ſaid here before, you may runne about by it in ſeven and eight fathom.

Betwixt the Rockes and Oeland, in the fareway to Gotland it is eight and thirtie, and nine and thirtie fathom deepe eaſy clay ground.

When Southerorden is northnorthweſt, ſomewhat northerly a league from you, there it is thirteen fathom deep.

When the little chappell upon Southerorden is weſtnorthweſt from you two leagues, there it is thirtie fathom deep.

When Southerorden lyeth weſt two greate leagues from you, there it is ſeven and twentie, eight and twentie, & nine and twenty fathom deepe.

Betwixt Faſterborne and Brontholme it is thirtie, & five and thirtie fathom deep, in the farewaye, but when you beginne to come neare Faſterborne, there it is ſhoaler water of fourteene, fifteen and ſixteen fathom.

When you (comming from the weſt) ſayle alongſt by the ſouth ſide of Brontholm eaſtſoutheaſt about a league without the land, and that the eaſt end of Brontholm is eaſt ſomewhat ſoutherly about two leagues from you, there it is deep ſeven or eight fathom groſſe pale ſand, that laſteth untill that the foreſayd eaſt end be eaſt and eaſt and by north about a league and a halfe from you, all in one depth, but when it commeth to be eaſtnortheaſt from you, it is fifteene fathom deep, ſmall blackiſh ſand-ground.

Four or five leagues from Brontholme, when the eaſt end (from which Brewers-riffe runneth off) is about eaſtnortheaſt or northeaſt and by eaſt, & the north end about north, or north and by eaſt from you, there lieth a banck off ſeven, eight or nine fathom, and lyeth northweſt and ſoutheaſt more then a great league long, the ſouthermoſt end lyeth about ſouthweſt from the eaſt end of Brontholme. He taat meeteth with this banck by night, may make ſome gueſſing thereby, for to direct his courſe thereafter wheter he be bound eaſtwards towardes Reefcoll, or towards Faſterborne.

About two leagues eaſtſoutheaſt from the a foreſayd eaſt end of Brontholme (to witt the lowe ſand poynt) where Brewers-riffe lyeth off, there it is four and twentie and five and twenty fathom deep, ſtonie ground.

About four leagues eaſt, ſomewhat northerly, or eaſt and by north from Meun, lyeth a banck off eleven and twelve fathom, which laſteth from thence with a northweſt and by weſt courſe, untill that Meun come to beweſtſouthweſt, or ſouthweſt & by weſt from you, then it is again eighteen, nineteen and twenty fathom deep, ſoft ground.

Faſterborne ſhall then be northnorthweſt and Steden weſtnorthweſt from you, going on with that ſame northweſt and by weſt courſe, you ſhall then get by little and little ſhoaler water, to witt, ſixteen and fifteen fathom, and cloſe by Steden fourteene, thirteene, and twelve fathom He that commeth from Witmondt or Jaſmondt towards the Sound, & runneth alongſt four leagues without Meun, runneth alongſt over this foreſayd banck, he that findeth himſelfe by night upon it, hath a good mark for to make his reckoning there after.

Betwixt Brontholm and the coaſt Pomerland; in the fereway, when you can ſee Brontholm it is 26 fathom deep, but ſo farre to the ſouthwards that you can ſee the coaſt of Pomerland, there it is 7 and 8 fathom deep, but without ſight of the land 12 and 13 fathom deep. Alongſt all the coaſt of Pomerland betwixt the New-deepe and Roſe-head, it alongſt by the coaſt 22 and 20 and alſo well 25 fathom deep.

Betwixt Colbergen and Garſhead it is all flat even ſtrand and ground, without any bancks. In the fareway betwixt Bruntholm and Reefcoll, it is ſeven and twenty and eight and twenty fathom deep, but farre to the northwards of it is at leaſt five and thirty and eight and thirty fathom deep.

Northweſt from Reefcoll foure or five leagues from the land, lyeth a banck of nine, ten, and eleven fathom, when you come from Bruntholm, and Reefcoll commeth to bee ſoutheaſt and by eaſt from you, then you come againſt this banck, and endeth when Reefcoll is ſouth and by eaſt from you.

From this foreſayd banck towards Bruntholm, it is five and twenty, thirty, and ſix and thirty fathom deep, ſoft clay ground, but towards Reefcoll it is ſhoaler.

If you caſt the lead often, ſayling alongſt that coaſt, you ſhall finde more bankes.

You may boldly ſayle alongſt this coaſt by night, or darke weather in eight, ten or twelve fathom off from Reefcoll untill about the Roſehead. Thwart of the Roſehead it is farre flat, and round as riffe ground. When you come paſt or about Roſehead it is very deep.

When the Roſe-head is ſouthſouthweſt from you about a league, there it is thirty fathom deepe, but very uneven and ful of bancks, and the ground white groſſe ſand.

Roſehead being ſoutheaſt from you, it is eight and twenty fathom ſteepe, with red ſtone ground, almoſt like as if it were riffe ſand.

Roſehead being weſt from you, there it is ſixteen fathom deep, and white ſand-ground.

Courſes and Diſtances.

From the poynt of Sandthamer to Somerhaven, the courſe is northnortheaſt, and north and by eaſt	2 leag.
From Somerhaven to Ahuys north	6 leagues.
From Ahuys to Hanno eaſt	6 leagues.
From Hanno to the Rocks, the courſe is eaſt and by ſouth	8 leagues.
From the Rocks to the Outlyers north & by eaſt	1 leag.
From the Outlyers to Chriſtianopell northeaſt and by eaſt	7 leagues.
From the Rockes to Calmer firſt northeaſt and by eaſt, and then northnortheaſt	16 leagues.
From Calmer to Scheggenes northnortheaſt	4 leagues.
From the Rocks to Southerorden, the ſouth end of Oeland eaſt	9 or 10 leagues.
From Sand-hamer to the Rocks eaſtnortheaſt, ſomewhat eaſterly	16 or 17 leagues.
From the north poynt of Brontholm to Ahuys north and by weſt, ſomewhat northerly	14 leagues.
From the north poynt off Brontholm to Hanno north & by eaſt	14 leagues.
From the north poynt of Brontholm to the Rock northeaſt ſomewhat northerly	16 leagues.
From the north poynt off Brontholm to Southerorden northeaſt and by eaſt a little eaſterly	23 or 24 leagues.
From the ſouth end or eaſt end off Brountholm to the Rocks northnortheaſt	19 leagues.
From the eaſt end of Brontholm to Southerorden northeaſt	24 leagues.
From Southerorden to Reefcoll ſouth and by eaſt	22 leagues.
From Southerorden to Roſehead ſoutheaſt	28 leagues.
From Southerorden to Quinſbrough-Deepe ſoutheaſt and by eaſt	48 leagues.
From Southerorden to Dermemell e. & by ſ.	48 leagues.
From Southerorden to Sevenberghen eaſt	48 leagues.
From Southerorden to Derwinde eaſt and by north and eaſtnortheaſt	60 leagues.
From Southerorden to the ſouth end of Godland eaſtnortheaſt and northeaſt and by eaſt	23 or 24 leagues.
From Southerorden to the Great Karell northeaſt ſomewhat northerly	27 leagues.
From Faſterborne to Elburgh eaſt and by north and eaſt	3 leagues.
From Elburgh to Wtſtee eaſt	10 leagues.
From Wtſtee to Goeſbeer eaſtnortheaſt	3 leagues.
From Goeſbeer to Sandhamer northeaſt	3 leagues.
From Faſterborn, or from the riffe to Brontholm eaſt and eaſt and by ſouth	20 leagues.

From

From Fasterborn to the northwards of Brontholm east and by south 20 leagues.
But to the southwards of Brontholm east & by south somewhat southerly 23 leagues.
From Wtstee to the north poynt off Brontholm eastsouth-east 9 leagues.
From Meun to Brontholm east and east and by north 21 leagues.
From Steden to the north ends of Brontholm east 24 leagues.
From Fasterborn to Whitmond southeast 15 or 16 leag.
From Fasterborn to Dornbosch southsoutheast 14 or 15 leagues.
From Meun to Whitmont southeast & by south 11 or 12 leagues.
From Meun to Dorneboſh southeast 9 leagues.
From the Jell to the poynt of Dornboſh north 2 leag.
From Dornboſh to Whitmont, the course is northeast & by east 4 leagues.
From Whitmont to Jasmont eastsouheast 3 leagues.
From Jasmondt to the Peert southsoutheast 4 or 5 leag.
From Dornboſh to the north end of Brontholme north-east and by east 19 leagues.
From Whitmont to the north end of Bront-holm north-east and by east 15 leagues.
To the south end east and by north and eastnortheast 15 leagues.
From Jasmond to the south end of Brontholm northeast and by east 13 leagues.
From the Peert to the south end of Brontholm northnorth-east 14 leagues.
From Jasmondt to Comyn eastsoutheast somewhat southerly 7 leagues.
From the New-deepe to Colbergen, the course is east & east and by south 16 or 17 leagues.
From Comyn to Colbergen eastnortheast 6 leagues.
From Colbergen to Coslyn eastnortheast 3 leagues.
From Coslyn to Ruwolde northeast and by east 5 leag.
From Ruwolde to Garshead northeast & by east 4 leag.
From Garshead to Reefcoll eastnortheast 4 leagues.
From Reefcoll to Lyba east and by north 7 leagues.
From Lyba to Sernevis east and by north 5 leagues.
From Sernevis to the Rose-head, the course is east & east and by north 4 leagues.
From Colberghen to Garshead northeast and by east 12 leagues.
From Reefcoll to *Rose*-head, the course is east and east & by north 17 leagues.
From the south end of Bruntholm to the Swin, south somewhat westerly 15 leagues.
From the south end of Bruntholm to Colbergen southeast and by south 16 leagues.
From the south end of Bruntholm to Reefcoll, the course is east and by south 24 leagues.
From the south end of Bruntholm to the Eartholms north 4 great leagues.
From the north end of Bruntholm, or from the Eartholms to Rose-head, the course is east, and east and by south 40 leagues.

How most off all the chiefest poynts and places off the East sea do lye distant from Brontholm.

From Bruntholm to Der Memell east, 64 or 65 leagues.
From Bruntholm to Der Lyba east and by north somewhat northerly 67 or 68 leagues.
From Bruntholm to Derwinda east northeast 80 leagues.
From Bruntholm to Houbrough, or the south end of Gotteland northeast and by east 50 leagues.
From the north end of Bruntholm to Southerorden, the south end of Oeland northeast & by east somwhat easterly 24 leagues.
From the south end off Bruntholm to Southerorden northeast, somewhat northerly 24 leagues.
From the north poynt of Bruntholm to the Rocks or out rocks northeast somewhat northerly 16 leagues.
From the north point of Bruntholm to Hanno, the course is north, & by east 13 or 14 leagues.
From the north end of Brontholm to Sandhamer northwest 6 or 7 leagues.
From the north end of Bruntholm to the point of Goesbeer northwest & by west 5 leagues.
From the north poynt of Bruntholm to Wtstede west northwest 9 leagues.

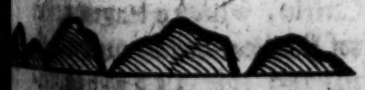
How these Lands doe shew themselves at sea.



Brontholme sheweth it selfe thus, when you come from the west.



The south end of Oeland sheweth thus, when it is thwart off from you.



Eartholms, being northnortheast om you, shew themselves thus.



The Eartholms, being east from you, shew themselves thus,



In this forme ariseth the Eartholms, being north from you.



Thus sheweth Whitmont, when you sayle alongst by it, being three leagues of from it.



Thus sheweth Jasmond, when you sayle alongst by it, being three leagues from the land.

Here under is a great bay a league long.

Dorneboſch.

Whitmont.



Thus shew themselves Whitmont and Dorneboſch, with the land betwixt them both, when it is about southsouthwest from you, so farre that you may but even see it from below.

The Rose-head. Woolsackes. Reefcol.



Thus sheweth the land betwixt Reefcoll and the Rose-head, when you sayle alongst by it three leagues without the land.



Thus sheweth the land betwixt Colbergen and the Stolp, when you sayle alongst by it about 2 leagues without the land.

The ſecond Demonſtration,

Where in

The Sea-Coaſtes betweene Rygs-head and Der Winda are ſet forth.

FRom the Roſe-head to the Heele, the courſe is ſoutheaſt eight or nine league diſtant. When you come neere the Heele, you are allmoſt ground off in thirty fathom. On the coaſt of the Heele cloſe by the land, it is four and twenty and alſo thirty fathom deep.

Roade under the Heele. Under the Heel you may anchor in twelve; and twenty fathom cloſe by the land, the ground there goeth off very much. If you be a little of from the land, then you are ground of, not very farre without the land you have no ground in fourty fathom. A league to the northwards of the Heele there runneth of a flat from the land, where of you muſt take heed, when you will go to anchor under the Heele, you may anchor on both ſides of the Heele, but on the inner ſide it is ſoft ground.

*F*rom the Heele to Danske before the Wiſſell, the courſe is ſouth and by weſt 5 leagues. If you will anchor before the Wiſſell, then anchor to the weſtwards of the Cheſts, or the Weſter-head in ten or twelve fathom.

Danske Deep. But for to ſayle into the Wiſſell, or the Danske Deep you muſt look for out the two maſts with barrels upon them, which ſtandeth upon the Cheſts, or the Weſterhead, bring one in the other, and ſayle in right with them, in betwixt the Cheſts, but when you are within Termunde, you muſt chuſe the eaſter ſhoare, for the Weſt ſhoare is flat, when you come before Boatſams flat, you muſt chuſe the ſide of the Green-ſhoare, and make there faſt with foure hawſers or cables.

Quinsbrough Deep. The Quinſbrough deepe lyeth from the Wiſſell, or the Cheſts of Danske eaſt and by north thirteen or fourteen leagues. From the Roſe-head eaſt ſoutheaſt ſoutherly 19 or 20 leagues, and from the Heele eaſtſoutheaſt eaſterly 12 leagues.

From the Wiſſell to the Quinſbrough-deep and all alongſt to the northwards of it, it is altogether a faire white ſandy ſtrand, upon both ſides off the deep ſtand ſome withered trees, to ſee to as if they were burnt, but upon the ſouth ſide ſtand two Capes, or beakons. If you wil ſayle in there, bring the capes one in the other, when you come in 10 or 8 fathom, and ſayle in ſo right with them, and ſo you ſhall run right with the buyes, which lye on both ſides of the Deep to 8 or 10 in number, to wit, on each ſide foure or five, ſayle in betwixt them, untill you come within in the Kettell. There is no certainty to be written of the lying in off this channell, as alſo off the Danske deep, where unto men might truſt, for by reaſon of the ſcouring of the Freſhuts, and with great ſtreaming of the Ice, they doe change oftentimes, and ſometimes in ſhort time, but the Lords of the land there have very great care to give charge, that they be alwayes well ſet with buyes and beakons.

For to anchor in the road without the deep, then anchor ſo that the poynt of Lockſteed lye about north and by eaſt from you, there it is eight, nine and ten fathom deep.

Within the Deep in the Kettell, men doe lye to tarrie for the wind in three fathom and three fathom and a halfe.

For to ſayle up the Haff go out of the Kettell about e. untill you come againſt the Heert, and ſoutheaſt over it and then alongſt the Haff amidſt the channell unto the Haverſtrome, the courſe is moſt eaſt. Being over the Heert edge ſomewhat to the ſouth ſhoare for to avoyd that riff which lyeth off from the north ſhoare about a third part into the Haffe, to wit, from the poynt by eaſt Fiſhouſes, there lyeth a litte buye upon it, and come no neerer it then twelve or thirteene foot. The right fare-way is to the ſouthwardes of it fourteen and fifteen foote ſoft ground, untill about Brandenburgh, from thence further it is by little and little ſhoaler twelve, eleven and ten foot upon the Haverſtraw. When you get the ſteeple of Quinſbrough in ſight, then you ſhall ſee alſo by it a round black little wood; keep the ſteeple on the north or eaſt ſide of that little wood, untill that you be paſt Brandenburgh, then let the ſteeple come a ſhips length to the eaſtwards of the little wood of trees, & ſayle ſo right with it, till you come by the buyes or little trees of the Haverſtraw, there you muſt run through amidſt te channell betwixt them, untill you come into tha Pregell which lieth up northeaſt unto the towne.

From der Pillo to Quinſbrough are about eight leagues, but to Melven it is about 9 leagues, you muſt alſo ſayle up there amidſt the channell about ſouthweſt, but the poynt over againſt the Pillo, where the caſtle Terbaly ſtandeth, you muſt avoid ſomewhat, which runneth far off flat.

Foure or five leagues north and north and by weſt from the Quinſbrough Deep lyeth the poynt of Bruſteroort, and betwixt them both Lookſteed, whereupon ſtandeth a Caſtle with a Church, not farre one from the other, and alſo two high hommocks or hills, and the land thereabouts is all full of trees.

From Bruſteroort to the Deepe of Der Memel, the courſe is northeaſt and by north ſixteen or ſeventeen leagues. It is there betwixt them both a faire ſtrand, and the land lyeth in a great bay. The deep of Der Memell lyeth in northeaſt, and northeaſt and by eaſt, and is two fathom deep, within it you come into a great Haffe: you may runne to the weſtwards about the poynt, and anchor there where you will.

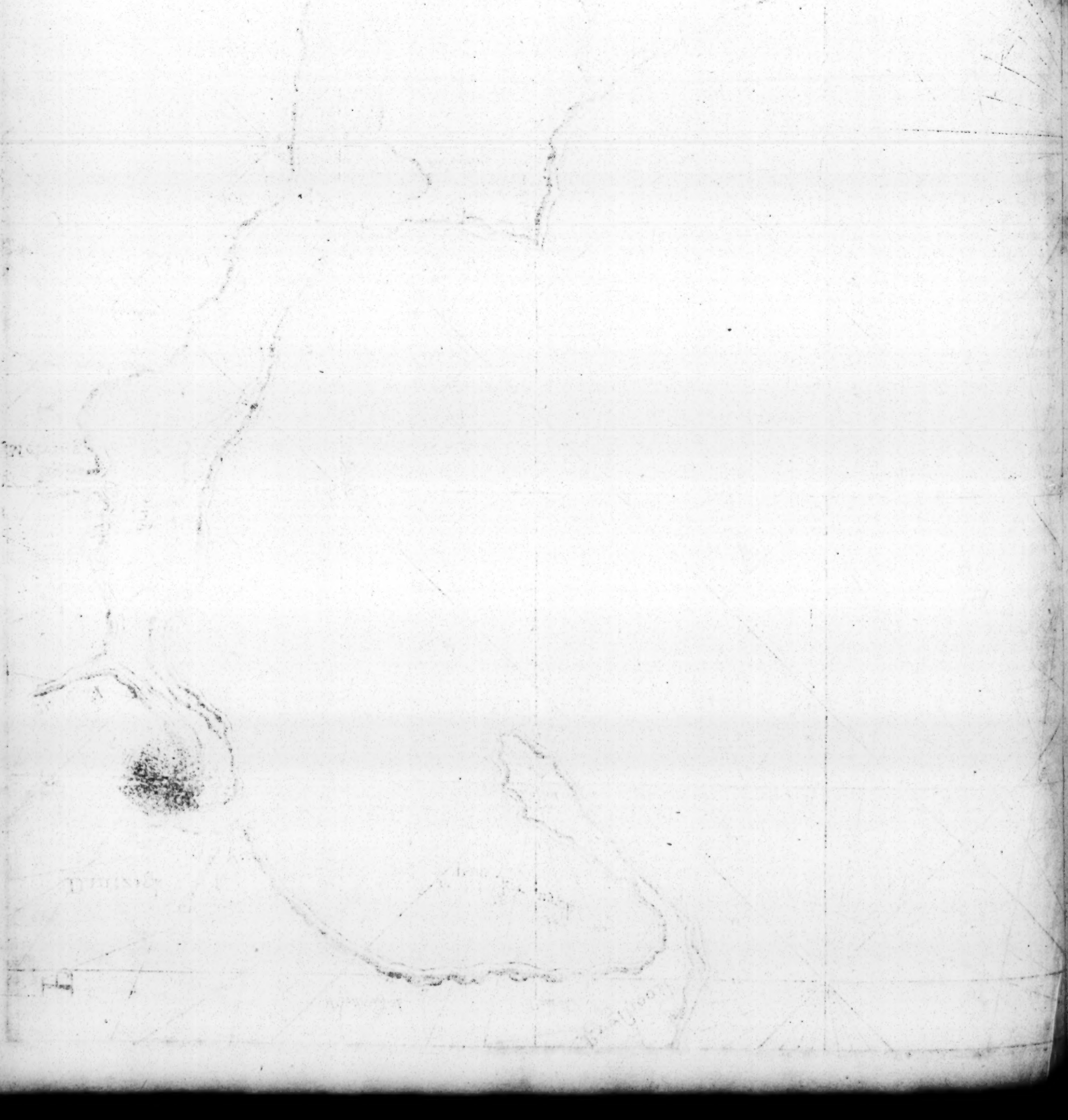
From der Memell to Heyligena, the coaſt lyeth north & by eaſt four leagues.

From Heyligena to the poynt of Sevenbergen, north and by eaſt, five leagues, that is with hommocks & hilly land.

Foure or five leagues north and by eaſt from Sevenbergen lyeth Terlyba. There goeth into the land a little river, but there can go in no ſhippes, there is no more then ſix foot water. On the north ſide of the river ſtandeth a Gentlemans houſe or Caſtle, which a turret upon the midſt of it, the northend of the houſe is covered with boards, and the ſouthend with red tyles, to the ſouthwards or the eaſtwards of it ſtand alſo ſome houſes, covered alſo with tyles, in betwixt two woods to ſee to. If you will anchor in the road of Terlyba, then anchor a little to the ſouthwards of the village, ſo that the foreſaid Gentelmans-houſe with the turret doe ſtand eaſt and by north from you in foure fathom and a half, and five fathom leſſe two foot, there is the beſt road and ground that is thereabouts. When you come out of the ſea, and fall with the land to the eaſtwards or to the northwards of Terlyba, you ſhall ſee within the land a black wood, and the houſes in a ragged valley of Sandhills.

*F*rom Terlyba to Derwinda, the courſe is northnortheaſt ſixteen, or ſeventeen leagues, betwixt them both the land lyeth in a bight, ſo that the coaſt alongſt by the ſhoare lyeth not ſo right, eſpecially four or five leagues by ſouth Derwinda, there it falleth away into a great bight, which men do call Sackerwyke, and alſo with more ſmaller bights and bayes towards Terlyba.

About four leagues to the northwards off Terlyba lyeth a poynt called Stickeroort, or Steenoort, thwart there of it is very flat, ſo that a good wayes from the land



Caarte
van
PRVYSSEN
en Coerlandt van Rygshooft tot
der Winda

Ryghhooft
Poesternyck
Pautzke
Pautzker wyck
Dantzigk
Groenwoort
De Kistem
Oxer Hoeft
Asterwis
Hoek
Poolse Hoeft
Ter Wisch
De Wyssel
Frisch Haff
Frische Deutsche Ecke
Melving
Frauwenburgh
Brunsberghen
Heiligh peil
Ter Baij
Fischhuysen
Brysacker
Brandenburgh
Koningsbergen
Coersch Haff
C O
Duytsche mylen 15 in een grad
Spaensche mylen 17½ in een grad
Eng. en Fra. mylen 20 in een gr

Gotlandt.

Blauburch

Bosuyck

Wisbuer

Hellicholm

Narwijck

Terlyba

Pelarge

Helligenæ

Scarpbergen

Stickergat ofte Steenbanck

Sackerwyck

Duckdalven Slot

Bacovens

Derwinda

E R L A N T.

land, it is not deeper then nine, tenne, & twelve fathom, all ſtony uneven ground, of this poynt you muſt take good heed, and not come too neere it. Anno 1599, in the Spring a man of Hoorn ſayled ſomewhat neere to this ſhoale, and came on ground upon an unknowne rock, & loſt ſhis ſhip. To the northwards of it, towards Derwinda thwart off Sacker-wyke it is all cleane ground, and farre flat, at many places a good wayes from the land not deeper then ſixe and ſeven fathom clean ſandy ground, good for to anchor in, when you lye by there with a northeaſt winde, and can geth nothing with turning to windwards. But if you keepe under ſaile, you may in turning to windwards come neere the ſhoore every where without feare in 4 or 5 fathom.

For to know Coerland.

For to known this coaſte of Coerland, then remember theſe places here under written.

Bakeovens.

At Derwinda ſtandeth a Caſtle with three Towers, which is covered above with red tyles, and under it is white, about a league to the ſouthwards of Derwinda, lyeth the Bakeovens, which is next to Domeſnes, the beſt land to be known of Coerland, it ariſeth firſt when you beginne to ſee the land, in a white Sand-hill, the top where of is full of trees, but when you come ſo neer the ſhoare, that you can ſee the other land alſo then there ariſeth more land with hommockes, ſo that then it is not ſo eaſy to be known.

Duke de Alves Caſtle.

About foure leagues to the ſouthwards of it in Sackerwyke lyeth yet a hommock or hill full of trees with ſome little hommockes to the eaſtwards of it, when you are thwart of Derwinda, you may even ſee it half wayes up to the top, but not well from below. This hommocke is called by ſome Duke d'Alves Caſtle, and lieth moſt alone: the land, as well to the ſouthwards as to the northwards of it, is moſt al even and plain land.

About ſix leagues to the ſouthwards of the foreſayd hommock, and 5 or 4 leagues and an half to the northwards off Terlyba, lye alſo two high hommocks cloſe one by the other, the land to the ſouthwards of them towardes Terlyba, is to ſee to farre off (when you are thwart of theſe two hommocks, or ſomewhat to the northwards of them) as if it were all broken land, thwart of this about 5 leagues from the land, or when you can but even ſee the land from below, it is 30 fathom deep.

Banck by Derwinda.

When you begin to come about Derwinda within 2 or 3 leagues off the land, there lyeth a banck of 12, 13, and 14 fathom: ſome ſay that weſt and by north from Derwinda there ſhould be no more upon that banck then 5, or 6 fathom water, it is about a halfe league broad betwixt the banck and the land a league without the ſhoare, it is againe 20 and 24 fathom deep.

If you will anchor before Derwinda, then bring the foreſayd Caſtle about eaſtſoutheaſt from you, then it commeth almoſt behind the high land, anchor in 5 fathom from the ſhoare, there is the beſt roade.

Of the Depths and groundes abouts theſe Coaſtes.

Betwixt the Heele and the Roſe-head, but neereſt the Hele, there it is 33 fathom deepe, and the ground is there white ſand.

At the Heele in the roade it is 25 fathom deep, the ground black ſand, and going off to 30 and 40 fathom.

Betwixt the Heele and Quinſbrough it is very deepe, comming neere the Heele it is ſteepe, but towards Quinsbrough and the Nerung it goeth up plainly flat.

How theſe lands doe lye one from the other and from other lands.

From the Roſe-head to Axternes ſoutheaſt 4 leagues.
From Axternes to Vernorden ſoutheaſt 1 league.
From Vernorden to the Heele ſouthſouheaſt 1 league.
From the Heele to Danske ſouth & by weſt & ſouthſouthweſt 5 leagues.
From the Cheſt or Wiſſell of Danske to the Deepe of Quinſbrough eaſt & by north 13 or 14 leagues.
From the Deepe of Quinſbrough to the poynt of Bruſteroort north and north and by weſt 4 or 5 leagues.
From Bruſteroort to the Deep of der Memell northeaſt & by north 16 or 17 leagues.
From the Roſe-head to Quinſbrough deepe eaſtſoutheaſt ſomewhat ſoutherly 19 or 20 leagues.
From the Heele to Quinſbrough deepe eaſtſoutheaſt eaſterly 12 leagues.
From the Roſe-head to Der Memell eaſtnortheaſt, ſomewhat eaſterly 29 leagues.
From the Roſe-head to Sevenbergen northeaſt & by eaſt 33 leagues.
From the Roſe-head to Derwinda northeaſt 53 leag.
From the Roſe-head to Dageroort northeaſt & by north 80 leagues.
From the Roſe-head to Eaſtergore, north and by eaſt, 45 leagues.
From the Roſe-head to Houbrough the ſouth end of Goteland north 35 leagues.
From the Roſe-head to the ſouth end of Oeland northweſt 28 leagues.
From the Roſe-head of Hannoe, the courſe is northweſt and by weſt, and weſtnorthweſt 43 or 44 leagues.
From the Quinſbrough Deep to Houbrough the ſouth end of Gotland northnorthweſt 48 leagues.
From Quinſbrough-deepe to Southeroorden, the ſouth end of Oeland, northweſt ſomewhat weſterly 58 leag.
From Der Memell to Houbrough northweſt 37 leag.
From Der Memell to Heylighena north and by eaſt 4 leagues.
From Heylighena to the point of Sevenberghen, north and by eaſt 5 leagues.
From Sevenberghen to Der Lyba north and by eaſt, 4 or 5 leagues.
From Der Lyba to Derwinda northnortheaſt 16 or 17 leagues.
From Der Memell to Bruſteroort ſouthweſt & by ſouth 16 or 17 leagues.
From der Memell to Danske ſouhweſt 32 leagues.
From Der Memell to the Roſe-head weſtſouthweſt ſomewhat weſterly 29 leagues.
From Der Memell to the Eartholms, or the north-end of Brontholm, weſt 64 or 65 leagues.
From Sevenbergen to the Roſe-head ſouthweſt & by weſt 33 leagues.
From Sevenberghen to Southeroorden weſt, 48 leagues.
From Derwinda to the Roſe-head ſouthweſt 53 leagues.
From Derwinda to Bruntholm weſtſouthweſt 80 leag.
From Derwinda to Houbrough weſt ſomwhat ſoutherly 37 leagues.
From Derwinda to Eaſtergore the courſe is weſt and by north 29 leagues.
From Derwinda to the Gotſche ſand n. w. 31 or 32 leag.
From Derwinda to Dageroort north ſomewhat eaſterly 31 leagues.

How theſe lands doe shew themſelves at Sea.



Thus ſheweth the Land betwixt the Rooſe-head and the Heele.

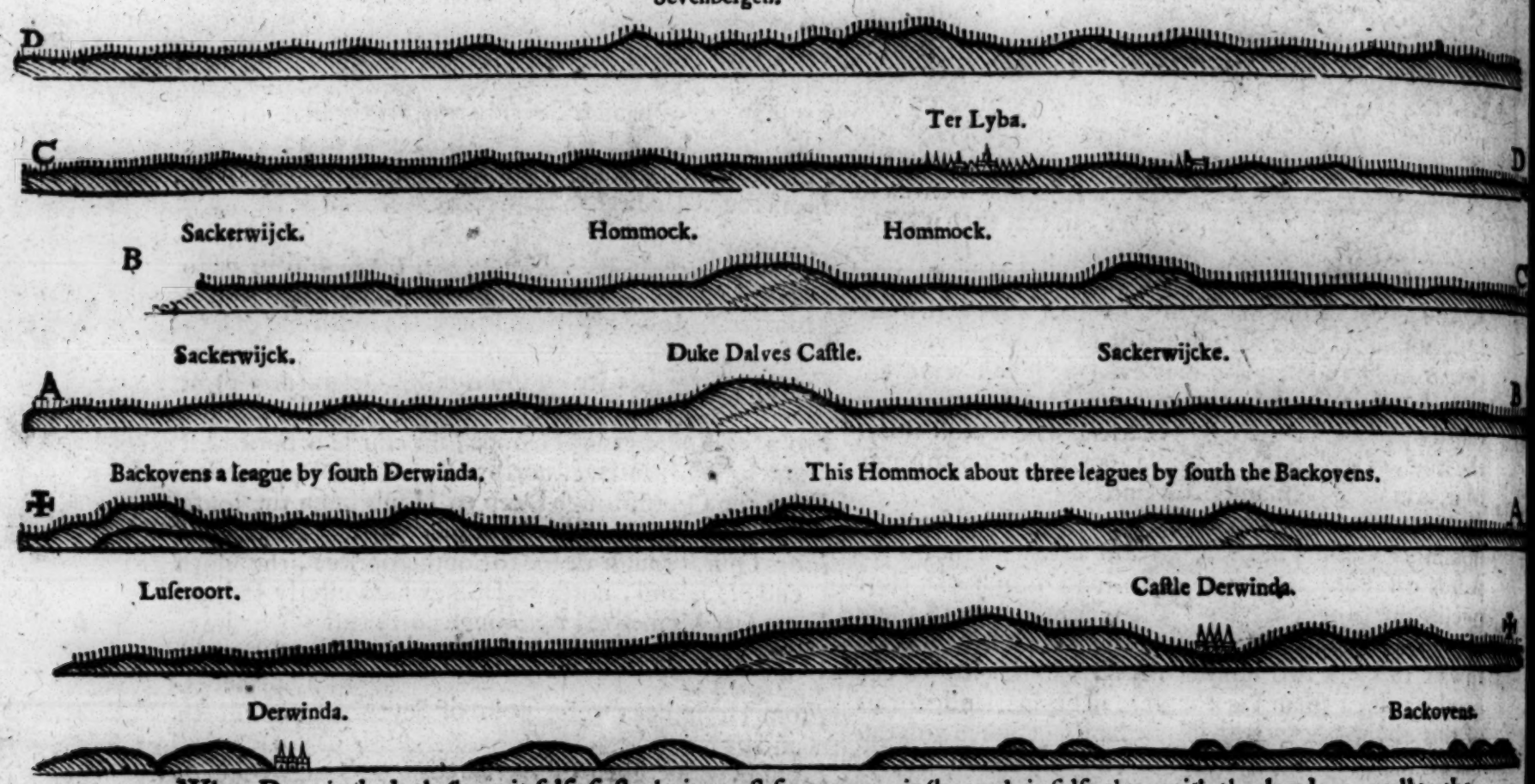


Thus ſheweth the land betwixt Quinſbrough deep and Brufteroort.



Thus ſheweth it ſelfe the coaſt of Coerland about Sevenbergen, when you ſayle alongſt by it a league without the land.

The coaſt of Coerland from Sevenbergen alongſt by Derwinda unto Luſeroort ſheweth, as is portrayed in theſe ſix figures following, the like markes belong one to the other, as AA, BB, CC, DD, &c.



When Derwinda doth ſhew it ſelfe firſt, being eaſt from you, it ſheweth it ſelfe thus with the land, as well to the northwards as to the ſouthwards, but when the Caſtle doth begin to come eaſtſoutheaſt from you, then it goeth behinde the land, that you cannot ſee it.

Der Winda.



Der Winda appeareth in this manner, when the forth lyeth S. E. and be Eaſt half a mile from you, there is a good road at 5 fathum.

Der Lyba.



Der Lyba, appeareth in this manner, when the Church lyeth E. and be S. and E. S. E. from you about a little mile of there is ye beſt road at 5 fathum, to norward of that lyeth a fort with a ſteeple in ye middeſt of it.

Pascaarte
van

LIFLANDT

ende Ooſt-Finlandt, van der Winda
tot aende hoeck van Alandt ende
voort tot Revel.

Der Winda

Luyſgroort

Doemberg ofte
blauwe berch

Doemberch

Domneſneſs

Kouwerwyck

Dagden

Ryga

Diuna R.

De Graaf

Dirpenn

Diemmond

Lemſael ofte
Sales

Parnou

Dusselgronden

Wyck

Qesel

O E S E

Abberburgh

Arensborgh

Abrick

Ramen

Pater noſter

Moensonde

Lyn

Sorghholm

Kanno

Noordt bodem

Boogh schaeren

Erke

Casselholm

Corpe sondt

Merscharen

Misshoopen

t gat van Aboo

Witoy

Aboo

Mongard

Alito

Hangd.

Rasebo

Dagerort

Da:

ger

oort.

Daden

Sybarchmer

Ossebolm

Grisholm

W. grasgronde

O. Grasgronde

Ogesholm

Hatsael

Cleine Rage

Grote Rage

Surry

Nargen

Revel

Revelsteen

De Wolff

S. Brigitta Clooster

Wolfs oort

t gat van Luys

Luxa

Essra

Helsinga

Vanes

Eecanes

Ekesondt

LANDT.

5 10 15

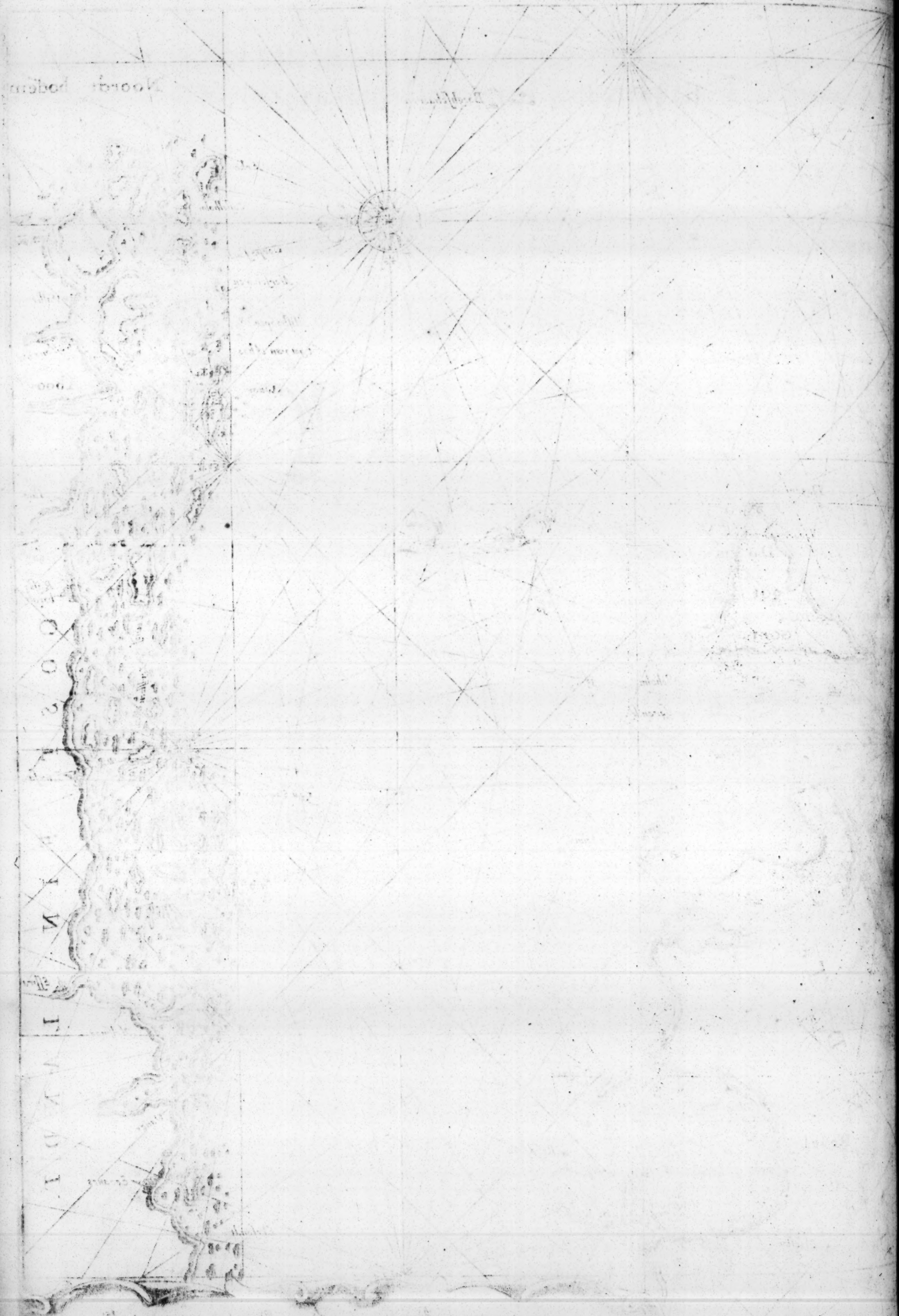
Duytsche mylen 15 in een graat

5 10 15

Spaensche mylen 17½ in een graat

5 10 15 20

Eng. en Fra. mylen 20 in een graat



The third Demonſtration,

Where in

Are Deſcribed the Sea-Coaſtes betwixt Der Winda and Revel, and the Iſlands of Aland.

THe lying of Derwinda, and how men ſhall know it, is here before declared.

From Derwinda to Lyſerorte, the coaſt lyeth northeaſt and by north foure leagues, and from Lyſerorte to Domeſnes eaſtnortheaſt twelve or thirteen leagues. When you are thwart of Lyſerorte, you can perceive no poynt, it ſeemeth to be all an even right coaſt from Derwinda to Domeſnes; but comming from Derwinda or Domeſnes, and being a league or two to the eaſtwards or to the weſtwards of it, you can ſee well that it is a blunt poynt, lying out. Thwart of Lyſerorte runneth off a great uneven ſhoale, at leaſt two leagues into ſea, but you need not feare of it, you may runne over it in four, five or ſix fathom by the lead, like as alſo alongſt all the coaſt of Coerland from Derwinda, untill about Domeſnes.

To the weſtwards of Lyſerort the land hath a little bight, there you may anchor for northeaſt, eaſtnortheaſt and eaſt winds: when it bloweth hard, & that you can do no good with turning to windwards, you muſt bring the poynt of Lyſerorte eaſtnortheaſt from you in ſeven fathom, there is clean ſand-ground and good lying.

The land betwixt Domeſnes and Derwinda is very eaſy to be known. At the poynt of Derwinda it is high, and goeth ſloping down by little & little to the eaſtwards unto Lyſeroort: Likewiſe 3 or 4 leagues by weſt Domeſnes lyeth a high blewhill, called the Doembergh, which is ſteep on the eaſt ſide, & goeth by little & little ſloping downe to the weſtwardes unto heare Lyſerorte, ſo that there two high double blewlands do go down into a valley one againſt the other, the low land betwixt both is Lyſerorte. The poynt of Domeſnes it ſelf is low ſandy land, it lyeth out about 3 leagues to the eaſtwards of the foreſayd Doembergh: but all that is together full of trees.

The ſouth end of Oeſell lyeth from the poynt of Domeſnes northweſt and by weſt about ſix leagues aſunder, there runneth off a great Riffe, about ſouth and by weſt, and ſouthſouthweſt into ſea, towardes the ſhoale Lyſerorte, called Swalverorte, that is a dangerous riffe, at leaſt three leagues long, verie hard and uneven, at ſome places towards Oeſell it lyeth dry above water, and at ſome other places it is two, two and an half and three fathom deep. To the weſtwards of that riffe lie alſo manie uneven Dwael-grounds a good wayes off from the land, which lye alongſt the coaſt of Oeſell to the northwards, which are at ſome places not deeper then two, three and four fathom.

If you will goe to Rye, and comming out of the ſea doe fall with the land about Derwinda, then leave not the coaſt of Coerland, but runne about by it upon the lead, all along unto Domeſnes in four, five, ſixe or ſeven fathom, according as you have the wind, that you may not fall without, or to the weſtwards of that riffe Swalverorte. The channell betwixt Coerland and that foreſayd riffe is fourteen, fifteen and ſixteen fathom, but very uneven. The ground upon the ſhoale thwart of Lyſerorte as at ſome places alſo very uneven for to ſound, ſometimes ſixe, ſometimes eight and nine fathom, the one caſt at leaſt two or three fathom more or leſſe then the other, and that not very farre from the land, but you need not feare of it, you may bouldly runne to the ſhoare in four and five fathom.

But if (when you come out of the ſea) you are paſt Lyſerorten, and come with the land to the northwards of it againſt Oeſell, then you have deeper water, for not far to the weſtwards without Swalverorte it is thirty fathom deep. If you can ſee Oeſel and Coerland, and that the Doembergh be eaſtſoutheaſt or ſoutheaſt and by eaſt from you, then runne on ſoutheaſt untill you come neare Coerland, for to avoyd Swalverorte, and then alongſt by it upon your lead towards Domeſnes, as is beforeſayd. Or when as you have the Doembergh eaſtſoutheaſt from you, then keepe it ſo ſtanding from you, and ſayle in ſo right with it, and then you ſhall (without hurt) runne alongſt over the taile of the outermoſt ſhoale of Swalverorte, it ſhoaleth up there very ſoone and ſuddainly from 13 or 15 and nine fathom, but if you bringe the eaſt ſide of the Doembergh not more ſoutherly from you then eaſtſoutheaſt, and ſoutheaſt and by eaſt, then you ſhall not meet with any dangers of the Dwaelgrounds, nor of Swalverorte, you ſhall thus ſayle alongſt at leaſt three leagues over the Dwaelgrounds and Swalverorte, over very uneven grounds, the one caſt at leaſt twelve, the other nine, and alſo wel ſeven, and ſixe fathom, but goe your courſe without feare, when as the Inner ſide, or eaſt ſide of the ſouth end of Oeſel commeth to be north, and north and by eaſt from you, then you are over the riffe, within all the foule grounds that might hurt you when as that you get then 13 or 14 fathom, then ſayle bouldly without fear towards Domeſnes. Marks to ſhunne Swalverorte

If it ſhould happen, that with a northweſt winde, you ſhould fall with the land to the northwards of Derwinda or Lyſerorte, and ſhould fear to come neere the Coaſt of Coerland, then keepe not further off to Sea, then that the eaſt point of Doembergh be eaſtſoutheaſt from you, when as then you bring the eaſt ſide of the ſouth point of Oeſell northnortheaſt from you, then you ſhall runne alongſt over Swalverorte in ſeven fathom. Betwixt Oeſel and Courland it is ſixteen and ſeventeen fathom deep. When as Domeſnes is ſoutheaſt and by eaſt, and the ſouth poynt of Oeſel northweſt and by north from you, and that you are a like neare to them both there it is eighteen fathom deep.

From the poynt of Domeſnes runneth off alſo a riffe northeaſt and by north, or a little more northerly a league and half into the ſea, which is on the eaſt ſide very ſteepe, but on the weſt ſide ſomewhat flatter.

When you come from out of the weſt, and are bound to Rye you may runne about by it upon your lead, in 5, 6, 7, 8, 9 and 10 fathom, ſo neare as you will, but according as the winde & weather ſhall be. I know of ſome that have ſounded about it in foure, and foure fathom & half; but he that will runne ſo ſomewhat neare about it muſt be very carefull in uſing of this lead, & not let it reſt.

Not very farre from the riffe, on the weſt ſide, it is 12 and 13 fathom deep. When as the poynt of Domeſnes, where the withered trees ſtande upon come to bee ſouthſouthweſt from you, then you come on againſt the weſt ſide of the riffe, when that poynt is ſouthweſt and by ſouth from you, then you are right thwart of the poynt, but when it is ſouthweſt, and ſouthweſt and by weſt from you, then you are about the riffe, and then you may bouldly goe on ſoutheaſt towards Rye. Domeſnes and the Deep of Rye lye ſoutheaſt & northweſt twenty leagues diſtant.

About eight leagues to the eaſtwards or to the ſouthwards of Domeſnes, runneth off another riffe from a poynt which you may ſound about in five & ſix fathom. The land betwixt Domeſnes and that poynt lyeth about

southsoutheast, and northnorthwest, but to the southwards of it, it falleth away to the south; so that betwixt this poynt, and the Deep of Rye, there is a great bay, which is called the Kowerwijck: somewhat to the southwards of this point in the bay, lyeth some high land, which lyeth from the Deepe of Rye w. and by s. and e. and by north. It must be very cleare weather when you can see it, lying at anchor before the deepe of Rye.

Kower wycke.

When as (comming from Rye) you shall be somewhat to the southwards in the Koperwike, and come running out there by the shoare, this foresayd poynt that thus oftentimes been mistaken for Domesnes, because that then you can see no Land without it, but when as you come about the point, you shall againe see the Land out a head, then you are yet about 8 leagues from Domesnes.

Under the poynt of Domesnes you may anchor on both sides, as well to the westwards as to the eastwards. If you will anchor to the westwards of it, then anchor in 6, 7 or 8 fathom, there you have good sand ground, and sheltred for east and southeast winds. If you wil anchor to the eastwards of it, then anchor in 6 or 7 fathom, a little within the poynt of the land, so that the poynt be north or north and by west from you, there is good sandie ground, and good lying for a southsouthwest, westnorthwest and northnorthwest winde: the point of the riffe lyeth theff from you about northnortheast a league and half. If you will anchor further from the shoare, so that the poynt of Domesnes be northwest or northwest and by north from you, there it is eighteen and twentie fathom deep and soft ground.

Road under Domesnes.

If that you are comming off from Rye against the riff of Domesnes, you will sail about it, then you must runne farre enough about without it, or if you will take it somewhat near, you must be exceeding carefull in using your lead. It is (as hath bene sayd) verie steepe on the east side, with a northwest waye, (which runneth thwart into the riffe) you shall have the one cast twelve, nine, or eight, and the next cast four, or three fathom, if you fall within the poynt of the riffe. But if you have been at anchor under Domesnes, and set sayle from thence and will sayle about the riffe, then you may the better runne about it by your lead. Goe from thence northnortheast and northeast and by north, that runneth most alongst by the riffe. When the point off Nesse commeth about west from you, then it will be by little and little somewhat shoaler, you must not spare your lead, but must sound often. With a northwest course come not nearer it then in nine. ten or twelve fathom. When the poynt of Nes commeth to be southwest from you, you may run about, sound it so in five, sixe or 7 fathom, then you come to the east side of the riffe, when that is southwest and by south from you, then you are right thwart of the point of the riffe, but when it is southsouthwest from you, then you are about the riffe, go then west southwest or more southerly towardes Coerland, and runne alongst by it, in five, sixe or seven fathom (according as the winde shall be) towards Luseroort.

If you sayle from Rye with an east or northeast winde, & shall saile by night about the rif, then set your course so, that you be sure you run farre enough alongst to the n. wards, or without the Riffe, & keepe that course untill that you come neare the grounds of Ambroock or Oesel in 15 or 16 fathom, then you shall be without doubt past the riffe, then goe on a while southwest, untill that you reckon the poynt of Domesnes to be southeast, or somewhat more easterly from you, then edge up to the coast of Coerland by your lead, and runne alongst by it, in four, five, sixe or seven fathom, as hath been beforesayd.

Round.

East and by north somewhat easterly eight leagues from Domesnes lyeth the Island Round: you may runne round about it by your lead, in six or seven fathom. All alongst the southwest side it is all foule and sharp rockie ground, therefore come not nearer the shoare there, then in 6 fathom. Southsoutheast about a half league from the south poynt lyeth a little plate, where upon it is not deeper then six foot, there hath once a man beaten off his rudder. It lyeth betwixt seven and eight fathom deepe, for to avoyd that, take thereabouts the sounding of the shoare in five or sixe fathom, and then you run through betwixt it and the shoare, or els if you keepe in eight or nine fathom, then you runne about without it.

Road under Round.

If you will anchor under Round for a southsouthwest southwest or westsouthwest winde, then runne about the southeast poynt, untill you come to the east side, there is a little bay, where stand a few houses with a chappell. which you can see when you come somewhat neare to the shoare, anchor thwart of it in five fathom, soo that the chappell doe stand southwest from you, there is the best road under Round, being clean sandy ground, but when it bloweth hard the sea commeth rouling in. At other places it is not very cleane.

The fareway betwixt Round and Domesnes is two and twenty and three and twenty fathom deepe, and betwixt Round and Duynemond three & twenty & four and twenty fathom.

From Round to the Deepe of *Rye*, it is southsoutheast, 15 leagues. Before the Deepe of the river Duyn you may anchor in tenne fathom, either to the southwards or the northwards of it, where you please.

The Deep of the river of Rye.

The Deep of the river of *Rye* is Pilots water, as well in sayling up, as sayling of. How men shall sayle there in or out it is not possible to describe, so that men might relye upon it, for by reason of the continuall scowring of the stream, and especially by some extraordinarie great freshuts, and strong drifts of yce, the depths and shoales do there often shift and change, where of every one that is bound thither may be mindfull of.

Lemsael.

From the Deepe of Rye to Parno, the course is northnortheast and northeast and by north five and twenty leagues, betwixt them both, about fourteene leagues from Rye lyeth a little towne called Lemsael or Sales, there goeth in a little deepe of eight foot water. Before that Deepe lyeth a banck, which you may sayle about on both sides, and come within it, there it is three fathom deep. The Island Kyn lyeth from Sales northwest and by west 7 leagues: from Round east and east and by north seven leagues, and from the Deepe of Rye north and by east about 14 or 15 leagues. It is a litte low Island, about 2 leagues long, & hath round about it most foule ground. Betwixt Kyn & the coast of Lysland it is 7 leagues broad, and the right deep betwixt them both is 8 and 9 fathom deep.

Kinsq.

Northwest eight leagues from Round, and north and by east seven leagues from Domesnes lyeth Ambroock, that is a little Island, which is round about foul, with sharpe stony ground, and lyeth two leagues distant from the coast of Oesell. Betwixt Round and Ambrook but neareſt Ambrook lye many uneven Dwael-grounds, of three, four and five fathom. Ambrook and the south end of Oesell lye eastnortheast, somewhat northerly, and westsouthwest somewhat southerly, about five leagues distant. *U*nder the south poynt of Oesell on the east side is a good roade for westerly winds. If you will anchor there, then anchor in eight or seven fathom, soo that the white Church, which standeth somewhat within the southermost poynt, doe stand west and by south from you, there is good soft clay ground, & you shall lye sheltred for a west and westsouthwest winde. The ground is there very even and flatte, when as you get the seven fathom, and sayle towards to land it continueth long all one depth of 7 fathom, untill you come very close by the shoare before it will be shoaler.

Dwael grounds.

Road under Oesell.

It is there all alongst by the east coast of Oesell flatt ground of three, four and five fathom.

For to sayle from the south end of Oesell unto Arentsbergh through within *A*mbrooke, you must leave two thirds of the water on the larboard side towards Oesell. and one third part on the starboard side towards Ambrooke, there you shall have about seven fathom water,

and

and ſoft claye ground, towards the Coaſt of Oeſell it is full of uneven Dwale-grounds; alongſt by the weſt ſide of Ambrooke you cannot lightly take hurt.

Arentſhergh lyeth from the ſouth end of Oeſell north-eaſt diſtant eight leagues, but from the Iſland Ambrook northnorthweſt four or five leagues. Upon the weſt ſide of Oeſell, the coaſt lyeth off from the ſouth end unto Hondſoorte, with divers bayes, about northnorthweſt & ſouthſoutheaſt twelve leagues, betwixt them both lye two lade places, Wyke and Reeck. Alongſt this weſt coaſt of Oeſell lye very manie uneven and foul grounds, where of men muſt take very good heed.

Hondtſoort, the northweſt poynt of Oeſell, and the poynt of Dagerorte lye northnorthweſt, and ſouth ſoutheaſt about 8 leagues diſtant. Betwixt them both is a great haven there runneth alſo a channell through, but it is ſhoale that no ſhips can go through, and all over ſharp and uneven ground. Upon Dagerorte ſtandeth a high tower which the Worthy Counſell of the towne of Revell cauſed there to be builded, for to know the land by, which men may ſee on both ſides of Dagerorte farre into ſea, and alſo may ſee it over the land farre in the foreſayd baye.

Under the poynt on the ſouthſide of Dagerorte is good lying for north and northeaſt winds and cleane ſand-ground, you may ſound about by the poynt of Dagerorte in ſeven or eight fathom, on the north ſide of the poynt is good road for ſoutherly winds.

From Dagerorte to Syburghnes, the coaſt lyeth eaſt-northeaſt ſeven leagues. Betwixt them both, to witt, three leagues from Dagerorte, and four leagues from Syburghnes, lyeth a ground, going flat of thwart from the land northweſt into ſea, at leaſt five or ſixe leagues, allmoſt in manner as the great luttiſh riffe, is firſt of three, four, five, ſixe and ſeven fathom deep, and waxeth deeper by little and little towards the Finniſh Scheers, where at laſt it runneth to nothing.

About three leagues without the land of Dagerorte, north and north and by eaſt from the high tower, there lyeth a ſuncken rock which is very ſteep, whereupon there is no more then ten foot water: A man of Oſſanen hath beaten upon it, which went no deeper then eleven foot and a half, preſently after the ſtroke the caſt the lead, and found five fathom depth. The tower of Dagerort was then from him ſouth and ſouth end by weſt.

Syburghnes is an out poynt, with two poynts, from each of which ſhooteth of a riffe, betwixt theſe two riffes is a faire flat ſand ſtrand, where you may anchor ſo neere the ſhoare as you will, in ſix, five or four fathom.

A little to the weſtwards of the weſtermoſt poynt of Syburghnes, not farre from the land lieth a ſhoale under water, about ſo great as a ſhipp, whereupon it is not deeper then twelve foot.

From Syburghnes to Oetgenſholm, the courſe is e. & by n. 7 leagues, betwixt them both goeth in the Moenſound.

To the ſouthwards of Oetgenſholm goeth in a great bay into the land, where in lyeth an Iſland, and behinde it a little towne, called Hap-ſael, there you may anchor where you will. On the ſouthweſt ſide of this baye, runneth of a great ſhoale or ledge of rocks at leaſt a great league into the ſea, which is very broad, you may runne in alongſt by it into Moenſound.

Eaſtnortheaſt, and w. ſ. w. from the eaſt hoeck of Oetgenſholm a league in ſea lyeth, a cliff under water, whereupon in the yeare a man of Harlingen is caſt away.

From Syburghnes to the *Oxe*holm & the Graſholm, the courſe is ſoutſoutheaſt 4 or 5 leagues, the Graſholm are two little greene Iſlands, and the Oxeholme lyeth about a league to the northwards of the Graſholm, about which you may ſayle, and anchor round about, a little league northeaſt from the Oxeholm lyeth a ground looſe from the land, which you muſt avoyde, called the weſter Graſground, there are two ſhoales, which are called the Graſgrounds, the other Graſground, which is called the eaſtermoſt, lyeth over againſt the Graſholm, towards the rifte of Hapſael, upon which there is no more then five foot water. He that will ſayle into the Moenſound, muſt take heed there of.

He that will ſayle off from Oetgenſholme through the Moenſound muſt goe on ſouthſouthweſt to the Graſholme, and ſayl in cloſe by it, for to avoyd the Graſground, which lyeth to the eaſtwards over againſt it. *From* the Graſholme to the poynt of the Oeſell, where the great tree ſtandeth upon, the courſe is eaſt five or ſix leagues. *From* the Graſholm towardes Oeſell lye four little Iſlands, each about a leagues one from the other. Moonſound.

When as you ſayle from Graſholme towardes Oeſell, you muſt ſayl alongſt by theſe little Iſlands, leaving them lying about two or three cables lengths on the ſtarboard ſide, untill that you come to the land of Oeſel, over againſt the great tree. In this fareway it is five fathom deepe.

When as you come ſayling ſo alongſt paſt the Graſground, you ſhall meete with an Iſland on the larboard ſide, to the northwards of it goeth in the Deepe unto the Caſtle of Moenſound in three fathom, but ſometimes, it is ſhoaler, for there it is all full of ſands. To the ſouthwards of the ſame Iſland goeth in another Deep, which you may ſayle through, untill you come to the end of *Oe*ſell, and then you leave the two little Iſlands by the ſouth end of Oeſell lying on the ſtarboard ſide. But the right and beſt Deep goeth from the foreſayd great tree, in alongſt by the land of Oeſell, which is three and four fathom deepe, and at laſt it will be ſix, ſeven & eight fathom: when you ſayle alongſt there, you leave the foreſayd two little Iſlands by the ſouth end of Oeſell lying on the larboard ſide. From the great tree to the firſt little Iſland, the courſe is eaſt ſoutheaſt eight or nine leagues, & then from the firſt little Iſland to the ſecond ſouth eaſt; and forth to the end of Oeſell eaſt and by ſouth. The Caſtle of Moone ſound.

From that end or northeaſt poynt of Oeſell runneth off a foul riffe, a great half league into the ſea, called the Paternoſter which you muſt avoyde. Paternoſter.

From this northeaſt poynt off Oeſell unto Parno, the coaſt of Lyfland lyeth eaſt ſoutheaſt and weſtnorthweſt.

When you come about that poynt, you may ſayle into the ſea or buye off Rye, where you will, weſt and by north to Arentſbergh, ſouthw. or ſomewhat weſterly to Ambrooke, ſouth ſomewhat eaſterly to Round, ſoutheaſt and by ſouth to Kinne, or where you will, the lying of Kinne is deſcribed here before.

From Kinne to Magno and Serckholm all alongſt into Parno, the courſe is northeaſt and by north eight leagues. Thwart of Magno and Serckhollom it is betwixt Coerland and the Iſlands, five and ſixe fathom deepe, and alongſt Coerland altogether a faire ſtrand. Magno Serckholm. Parno.

Parno lyeth in a great Baye, it is there in the roade three and four fathom deep. For to anchor there, you muſt anchor ſo that the ſteeple of Parno ſtand northnortheaſt from yon, there is the beſt roade.

Oetgenſholme and Syburghnes lye eaſt and by n. and w. & by ſouth ſeven leagues diſtant one from the other. Oetgensholm.

You may ſayle round about Oetgenſholme, and anchor under it, for northerly and northweſt winds in ſixe or ſeven fathom, but you muſt beware of the Blinde as before is ſayd.

From Oetgenſholm to greet Roge, the courſe is eaſt four leagues, betwixt them both, a little to the ſouthwardes of the fareway lyeth a ſhoale even above water, which you may ſayle round about, but you may not come verie neare it, becauſe it is ſtonie and rockie round about it. Great Roge is an out point with two or three white Chalck-hills, and thereby is verie eaſy to be knowne. Betwixt this poynt and Oetgenſholm, ſomewhat more ſoutherly lyeth another poynt, called little Roge betwit it and great *Roge*, goeth a broade Sound into the land of ſixe and ſeven fathom depth, but in the Great Roge. Little Roge.

end

end it is ſhoale. There-abouts it is all cleane ground, and good for to anchor in.

*F*rom great Roge to the Iſland Narghen, the courſe is eaſt ſomewhat northerly five leagues.

When you ſayl from great Rogen towards Narghen, you ſhall finde four leagues to the eaſtwards of great Roge an other poynt with two white chalck ſpots, called Surp, betwixt it and great Roge, the land falleth away to the ſouthwards, into a great baye. If you will ſaile to Revell, then ſail alongſt by that poynt of Surp, towards Narghen, leaving it on the larboard ſide off you, going on ſtill eaſt, untill you cou come to the eaſt end of Nargen. Being there by it, then goe on eaſtſoutheaſt a league and an half, and then you ſhall come by the end of the riffe, which lyeth off from the Blote Karels, come no nearer it then in ſixe fathom. When as the caſtle of Revell commeth without the Karels, then ſayl right unto the head of Revel, untill you come to the eaſt ſide, let your anchor fall there, and then hawl with the fore-ſhip or ſtearne, to the head, and make you faſt by foure cables, for the north and northnorthweſt windes which blow there flat open in, making it a lee ſhoare, ſo that ſometimes with ſuch winds there commeth in a rowling ſea.

Riffe of the Karels.

Revell.

Eaſt about 4 leagues from the ſouth end of Nargen lyeth the Iſland the Wolfe, which is about a league long.

Northnorthweſt, and northweſt and by north two leagues from the weſt end of the Iſland the Wolf, and northeaſt and northeaſt and by eaſt from the north end of Nargen lyeth a rock under water, called the *R*evel-ſtone, although there be no more water upon then 3 or 4 foot, yet it is in the Summer time with faire weather oftentimes ſo ſmooth water, that it doth not break upon it, and it is alſo very ſteep, ſo that you may not come neerer it by your lead then in 12 fathom. The markes for to knowe the place of this Revel-ſtone are theſe: When the northeaſt end of Nargen is ſouthweſt and ſouthweſt and by weſt from you, and the high ſteeple of Revell is a capſtane barrs length, or a little more to the weſtwards off the weſt end of the Iſland the Wolfe, then you are right thwart of this rock. The ſteeple of Revel is alſo then right ſouth from you. But when the ſteeple of *R*evell commeth to the Wolfe, and that you are bound to the eaſtwards, and you are ſurely pas this Revell-ſtoone, and a good wayes to the eaſtwards of it.

Revell-ſtone.

The Wolf.

From the weſt end of the Iſland the Wolfe lyeth off a riff to the northwards into ſea, about an Engliſh mile toward the Revell-ſtone, upon the end of this riffe lye five or ſixe rocks a little above water. If you come away from Revell on northand by weſt alongſt by the Wolf, then marke the poynt of Surp, when that commeth even unto the ſouth end of the Iſland Nargen, then you ſhall alſo haven even the length of the foreſayd riffe. If you looke out then on the ſtarboard ſide, and be not ſayled very farre alongſt to the weſtwardes of the Wolf, you ſhall ſee the foreſayd rockes (lying upon the end of the riffe) lye thwart from you, and then you may run to the northwards about by them in five fathom without doing amiſſe.

Betwixt Nargen and the Wolf lyeth alſo a ſtony ſhoale which is very broad, but much neerer Narghen then the Wolf, and lyeth from the ſouth poynt or Narghen about northeaſt, and from the north poynt eaſtſoutheaſt. Therefore if you bring the ſouth poynt of Narghen about ſouthweſt or ſouthweſt and by ſouth, and the foreſayd north point weſtnorthweſt from you, and that the Wolf lye then free from the maine land, you ſhall not miſſe to fall upon this ſhoale.

Shoale of Nargen.

You may ſayle round about Nargen, and alſo anchor under it for northerly and weſterly winds in 10, 12, 14 & 18 fathom.

Nargen.

From Nargen to the Iſland Wranger, the courſe is eaſt, ſeven leagues. The lying there of you may ſee in the following directions.

Of the Coaſt of Finland betwixt the Alands Haffe and Elſenvos.

Betwit Uxe or Boſtell on the coaſt of Sweden, & the Iſland of Aland, goeth in the Alands Haff, which men do call the North Bodem, which lyeth up ſo farre to the northwards into Finland, that a ſhip with good freſh way ſhould ſcarce be able to ſayle to the end off it in five dayes, upon the fartheſt end of this North Bodem lyeth the towne Toren, there Sweden is parted from Finland.

Al

At the outermoſt rocks of Finland on the Alands Haff lye 3 Iſlands, Ercke, Caſtelholm and Corpe. Ercke is the weſtermoſt of all, and the outermoſt, from thence goeth in the Corpe ſound, northeaſt alongſt thwart of Caſtelholm and Corpe. Corpe lyeth within the other Iſland, and from Corpe you may edge over into the Liet off Abbo, which commeth running off from Uttoy: you may alſoo ſayle up into this channell about behind Lipland, and ſo come out into the North Bodem.

Er Ca hol Co

Uttoy is a great Iſland, upon it ſtandeth a great maſt with a barrell for a beakon, and lyeth from the Iſland Corpe eaſt & weſt about nine leagues. On the weſt ſide of Uttoy goeth up the Liet of Abbo, which lyeth in firſt north and north and by eaſt about three or four leagues, and then you come on againſt a great Iſland. And then it lyeth in alongſt that great Iſland northeaſt unto the Sound of Abbo. Abbo lyeth at the end of that foreſayd great Iſland. This Liet runneth up alongſt to the eaſtwards through betwixt the rocks about thirteen leagues, within it lyeth a rock under water which is a Magnes or Load-ſtone, alſo the grounde ſeemeth to be there of the vertue of the Load-ſtone, or when you come thereabouts, the compaſſes doe not ſtand, but run and turne without any certain ſtanding ſtill, untill that you be at leaſt a league paſt it, and then they begin to ſtand right againe. From thence it lyeth eaſt and eaſt and by ſouth all alongſt through the rocks unto the Rough Iſland, to the weſtwards of it runneth the channell of Luys into the ſea, when you are thwart of it at ſea, you may ſee the land of Revel. It is there betwixt them both, to wit, betwixt the Out rockes and Nargen, or the land thereabouts ten leagues broad.

Ut

Abb

Mag nes.

The Out-rocks of Luys, and the channell of Uttoy lye eaſt & weſt about 21 or 22 leagues diſtant, although it be there betwixt them both all broken land, and full of rocks, yet nevertheles there are no havens nor channels fit for ſhips to come into.

From Luys alongſt without the Rocks to the channell of Elſenvos, the courſe is eaſt and by north 15 or 16 leagues, but Nargen or the Wolf, and the channell of Elſenvos lye northnortheaſt & ſouthſouthweſt about 16 or 17 leagues aſunder.

Luy

How theſe lands doe lye one from the other, and from other lands.

From Derwinda to Lyſerorte northeaſt	4 leagues.
From Lyſerorte to Domeſnes eaſtnortheaſt	12 or 13 leagues.
From Domeſnes to *R*ound eaſt and by north ſomewhat eaſterly	8 leagues.
From Round to Duynemond or the mouth of the river of Rye ſouthſoutheaſt	15 leagues.
From Domeſnes to Rye or Duynemond ſoutheaſt	20 lea.
From Duynemond to Lemſael or Sales northeaſt,	14 leagues.
From Duynemond, or the mouth of the river of Rye to the Iſland Kin north and by eaſt	14 or 15 leagues.
From Round to the Iſland Kinne eaſt & by north	7 leagues.
From Domeſnes to the ſouth end, or the road of Oeſell northweſt and by north	6 great leagues.
From Domeſnes to Ambroeck north and by eaſt,	7 leag.
From Round to Ambroeck northweſt	8 leagues.

From

From the south end of Oesell to Arentsbergh northeast, 8 leagues.
From Luseroorte to Houbrough west & by south, somewhat westerly 40 leagues.
From Lyseroorte to the poynt of Aland or the Islands, north and by west, somewhat westerly 52 leagues.
From the south point of Oesell to Hondsorte northnorthwest 12 leagues.
From Hondsort to the poynt of Dagerorte northnorthwest 8 leagues.
From Dagerorte to Syburghnes e. & by n. 7 leagues.
From Syburghnes to the Oxeholme and the Grasholme southsoutheast 4 or 5 leagues.
From the Grasholme to the great tree upon Oesell, south 5 or 6 leagues.
From the northeast poynt off Oesell to Parno east southeast 20 leagues.
From Arensbergh to the northeast point of Oesell east & by south 8 or 9 leagues.
From Ambroeck to the northeast poynt of Oesell northeast somewhat easterly 9 or 10 leagues.
From Round to the northeast end of Oesell north somewhat westerly 13 leagues.
From Lemsael to Parno north and by east 11 leagues.
From Dagerorte to the Rose-head southwest and by south 80 leagues.
From Dagerorte to Eastergore southwest and by west 39 leagues.
From Dagerorte to the Godtsch sand w. s. w. 26 leag.
From Dagerorte to Boechschaer northwest and by west 18 leagues.
From Dagerorte to the poynt off Alandt or the Islands northwest and by north 26 or 27 leagues.
From Syburghnes to Oetgensholm east & by n. 7 leag.
From Oetgensholm to great Roge east 4 leagues.
From great Roge to Surp east 4 leagues.
From Roge to Nargen east somewhat northerly 5 leag.
From the southend of Nargen to the Island the Wolf, east 4 leagues.
From Revell to the Wolf n. somewhat easterly 5 leag.
From Oetgensholme to the Out rocks of Luys north and by east 15 or 16 leagues.
From Syburghnes to the Channell of Abbo, or Uttoy northwest and by north 20 or 21 leagues.
From Uttoy or Abbo to the channell of Luys, the course is east 22 leagues.
From Luys to the channell of Elsenvos e. 16 or 17 leag.
From Nargen to the channell of Abbo, the course is westnorthwest 32 or 33 leagues.
From Nargen to the channell of Elsenvos northeast and by north 17 leagues.
From Nargen to the Outrocks of Luys northwest and by north 13 leagues.
From the Wolfe to Peltingschares eastnortheast 20 leagues.
From the channell of Abbo to Boeschaer southwest somewhat southerly 16 leagues.
From the Island the Wolf to Wranger east and by south 3 leagues.

How these Lands doe shew themselves at Sea.



Coerland showeth it selfe in this forme, betwixt Lyseroort and Domesnes, when you sayle alongst by it.



Thus sheweth the coast of Coerland, from Domesnes past Derwinda, and the Backovens towards Der Lyba.



When you sayle about Domesnes, then Oesel sheweth it selfe thus.



The little Island Ambroeck.



The Island Round, when you sayle alongst by it, sheweth it self thus.



Round.



Thus sheweth Coerland to the eastwards of Domesnes.



The mouth of the Duyn.

When you come against the mouth of the Duyn, the River of Rye, the land sheweth it self on both sides of it thus.



When Dageorte is northnortheast foure leagues from you, it sheweth thus.



Dagerorte being northeast from you three or four leagues, sheweth it self thus.



In this forme appeareth Dagerorte, when the towre is east and by south, and the northermost poynt is east from you four leagues, and then you may even see it in clear wather from below.



When as the towre upon Dagherorte is ſoutheaſt & by ſouth, & the land to the eaſtwards of it is ſoutheaſt fourre leagues from you, then it ſheweth it ſelfe thus.

Syburghnes.



When the towre of Dagerorte is ſouthſoutheaſt from you, then it ſheweth it ſelfe (with the land to the weſtwards of it) thus.

Syburghnes. Dagerorte.



Thus ſheweth the land of Dagheroort towards Syburghnes.

High-hill.



Thus ſheweth *Syburghnes* when the high hill is ſouthſouthweſt 4 leagues from you, there it is five and thirty and ſix and thirty fathom deep.



Thus ſheweth Revell when you are by the Revelſtone without the Wolf.



The forme of Oetgenſholm.

The fourth Demonſtration,

Where in

The Sea-Coaſtes betweene the Wolf and the outtermoſt of the Eaſt Sea.

Wranger. THe Iſland Wranger lyeth from Nargen eaſt diſtant 7 or 8 leagues, and 3 leagues eaſt and by ſouth from the wolf.

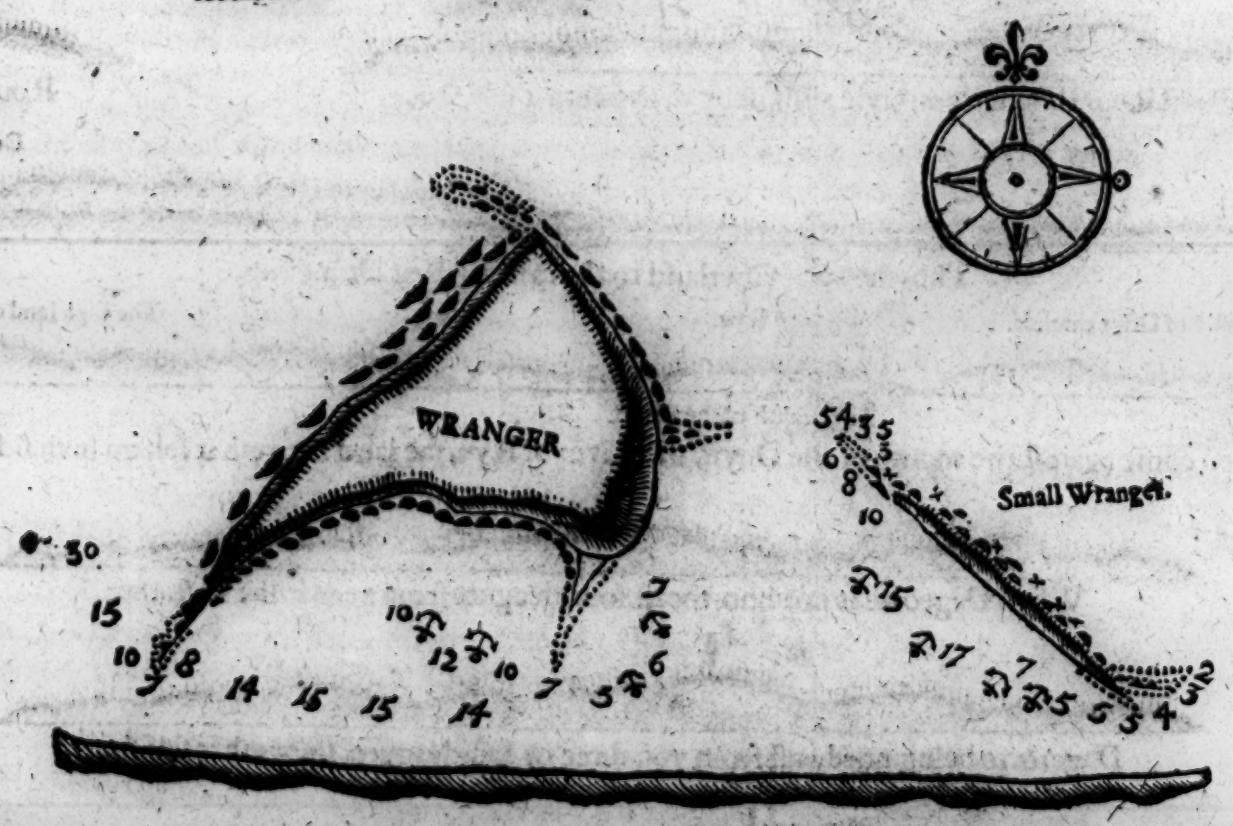
Under Wranger is on both ſides good road and good anchor ground, eſpecially on the ſouth ſide, where there is a Bay, there you may anchor betwixt the two poynts in ten, twelve, or fourteen fathom, according as ſhall be convenient, and lye ſheltred for a northeaſt and eaſt, and alſo for a northweſt and weſt winde. You may ſayle round about Wranger, but from ſome poynts (as from the ſouth poynt, and from the north poynt) lye off ſome little riffes, whereof you muſt take heed, and be carefull in uſing the lead when you ſayle about by them.

About an Engliſh mile from Wranger lyeth little Wranger, a little long ſmall Iſland, lying about northweſt and

GREAT AND SMALL WRANGER.

Koexſchaer.





O O S T

L I I F L A N D

Borgo

Elsen

Parna

Cuma

Fromal

Reisanborgh

Peltingh

Peltingh sonde

Putsagre

Peltingh schaeren

De Tekken

Schaelandt

Koex schar

Wranger

Clein Wranger

Eylandt met de stangh

Cleine Luijers

Groote Luijers

Kalcgrondt

't Hoft

Eechholt

Kock

Brocklam

Wesenborgh

Tessborgh

't Hagelandt

Duytsche mylen 15 in een graadt

Spaensche mylen 17½ in een graadt

Franse en Eng: mylen 20 in een graadt

I N L A N D T.

Wyborgh

Vermax

Olby

Vekelax

Lepares

Rohel

Kivaneb

Clene Wisscher

Goeschaer oste
Grote Wisscher

Quade Schaer

Biorke

Schans

Somners

Narve

Rutte sgrre

Retensari

Copora

Castram

Ruße haken

R V S L A N T.

Der Narva

De Zeecusten
van
LIIFLANDT,
ende Oost Finlandt. van Wolfs-oort
tot aen Wyborgh.

and ſoutheaſt, which is rocky and foul, eſpecially on the northeaſt ſide. From the ſoutheaſt poynt runneth off alſo a rocky riff whereof you muſt take heed.

On the ſouthweſt ſide is good anchoring for northeaſt and eaſt windes, anchor under it ſo that the ſoutheaſt poynt lye about eaſt from you, there is good lying for northeaſt and eaſt windes.

From the northweſt poynt runneth offalſo a little riffe, which you may ſound about in foure, five or ſix fathom, according as your ſhip goeth deepe, when as you will goe to anchor there, comming from the northwards, or about to the northwards, of the Iſland.

About a great league north from the eaſt end of Wranger, and two little leagues north and by weſt from little Wranger lyeth a little Iſland, which by ſome is called Kocx- Kuyken, but commonly is called the Kocxſchaer, which ſchaer. is a little bare rock with a Warder upon it, you may ſayle round about it on both ſides, it lyeth from the Wolf northeaſt and by eaſt diſtant two great leagues.

From Wranger to Eckholme, the courſe is eaſt and by ſouth 14 leagues.

Three leagues by weſt the Eckholms lyeth an out-poynt to the eaſtwards of it is a Bay, called the Monkwyke, there it is good anchoring for ſouthweſt and weſt winds in 8, 10, Monk- or 12 fathom, Betwixt this poynt of the Monkwyke and eyck. Wranger lye 3 little long Iſlands, lying alongſt the coaſt of Lyfland, about a halfe league from the ſhoare which are very foule and rocky, and almoſt nothing but rocks, whereof you muſt take heed, otherwiſe the coaſt betwixt them both is cleane.

Eck- The Iſland Eckholm is clean round about, and lyeth holm. about northweſt and ſoutheaſt, it ſheweth it ſelf high at both ends and in the middeſt with a Valley. Under Eckholm is good anchoring at the northeaſt ſide for weſt & ſouthweſt winds in 20, 22 and 25 fathom, and on the ſouthweſt ſide for eaſterly winds.

Five leagues to the eaſtwards of Eckholm lyeth the Caſtle Telſburgh, thwart of it lyeth of a ſhoale from the Tels- ſhoare, but you may ſound it in 8 or 9 fathom. From then- burg. ce the coaſt lyeth alongſt moſt eaſt & by ſouth unto the road of the Narve about 15 leagues, it is altogether cleane without foule ground, ſo that you may alſo ſayl alongſt there by night in 8 or 9 fathom without feare.

Northwards from this coaſt in the fareway betwixt Eckholm & the Iſland of Highland lye the Chalk grounds, Hoſts, the little and great Tutters, all of them with very dangerous foule grounds and ſhoales. Eckholm & high land lye eaſtnortheaſt and weſtſouthweſt diſtant about 10 leagues. About 2 or 3 leagues eaſt from Eckholm & alſo 2 leag. from the main land lye the Chalck grounds, Chalk- which are foul grounds, allmoſt 3 leag. long under water, grounds and lye to the weſtwards weſtnorthweſt into the ſea, and to the eaſtwards almoſt to the riffe of the Hoftes. Some ſay that they are faſt to it, ſo that you ſhould not be able to ſayle through betwixt them.

The Hoftes lyeth ſouthſouthweſt from High-land Hoftes. about 5 or 6 leagues, which is a long ſmall Iſland foule round about, whith two fowle riffes that lye ont, the one lyeth of ſomewhat to the eaſtwards, and the other to the weſtwards unto the Chalck-grounds.

Northwards from the Hoftes lye the little Tutters, and 2 leagues to the aſtwards of the little Tutters lye the great Tutters.

Little Tut- The little Tutters are two Iſlands not high but round ters. about rocky, riffy, and fowle, they lie ſouthweſt and ſouth about three leagues from Highland.

Greate Tut- The great Tutters lye from the little Tutters eaſt ters. ſoutheaſt about 2 leagues, and from Highland ſouth alſo three leagues, there lyeth off from it alſo a great ſtony riffe weſtwards towards the little Tutters: there lyeth alſo betwixt the little and great Tutters a row of rockes, where of you muſt take heed when you will ſaile through betwixt them.

South and by eaſt about two leagues from the great Tutters lyeth a ſhoale of five fathom. He that will ſayle to the ſouthwards of theſe foreſayd Iſlands and ſhoales Shoale. towards the Narve, may be mindfull thereof, it lyeth about foure leagues to the eaſtwards of Telſburgh: two or three leagues from the ſhoare.

Betwixt the great Tutters & Highland lyeth a ſhoale upon which there is no more then ſix foot water.

Southeaſt a great halfe league from the ſouth end of Highland lyeth another ſhoale of a fathom and halfe and two fathom deep.

To the northwards of al theſe foreſayd rocky Iſlands and foule ſhoales, lyeth a little Iſland whereupon ſtandeth a Maſt for to know it by, & to deſcerne it from the other little fowle Iſlands, that you may come indifferent near to it, but not too near, for it is alſo ſomewhat rocky and fowle, but not farre of, it lyeth from the little Tutters weſt and by north and weſt northweſt about three leagues, from the Iſland Highland ſouthweſt & by weſt at leaſt foure or five leagues, but from Wranger eaſt ſomewhat ſoutherly eighteen or nineteen leagues.

He that will ſayle of from Wranger towards the Narve alongſt to the northwardes of theſe foreſayd grounds, and doth get ſight of this little Iſlands with the maſt, may thereby the better know to direct his courſe but it is not wiſdome to ſayle through theſe foreſayd ſhoales, except for them that are very well aquainted.

The Iſland Highland or Hooghland, is about four High- leagues long, and a league broad, lying ſouthſoutheaſt land or and northnorthweſt. When you come out of the weſt, it Hoog- ariſeth in three hommocks, ſo high to ſee to as Coll in land. tho Sea reach, upon the north end and upon the eaſt ſide it doth ſtand all full of trees. A little about the north point on the eaſt ſide is a little bay thwart of a Boers houſe, there it is clean ground and good lying for weſterly, ſ. w. winds, ſomewhat to the ſouthwards of it, not very far from the ſhoare, lyeth a great rock above water. At the north end is alſo good lying for a ſoutheaſt wind. Alongſt the ſouthweſt ſide you may alſo anchor every where in ſixteen, ſeventeen, or eighteen fathom cloſe by the land for eaſt & northeaſt winds.

From the ſouthweſt ſide of Highland unto the road of the Narve, the courſe is ſoutheaſt and ſoutheaſt and by ſouth about fifteen leagues, and then you run through betwixt the Higland & the Tutters.

Likewiſe when as you ſayle on northweſt from the roade of the Narve, then you run alongſt betwixt the Tutters and Highland, but you muſt be very careſull, and take heed of the foreſayd ſhoales, which ly betwixt them both.

The land of the Narve men do know by three high hills, lying a league to the weſtwards, or to the ſouthwards of the road, and a league further to the weſtwards ſtand ſome little houſes upon the high land.

The towne of the Narve lyeth upon a river about The two leagues within the land. For to ſayle in there men Narve. were wont to look out for a long hill, which lyeth on the ſouth ſide within the rivers mouth, and at the the eaſt end goeth downe ſomewhat ſteep, with ſome high trees to the eaſtwards of it, then they brought the woodden tower of the Narve to the northwards of the foreſayd trees and did run in ſo with it. When as the eaſtermoſt of the three foreſayd hils (a league to the weſtwards of the rivers mouth) come over a little hommocke, which lyeth on the water ſide, then they were upon the barre of the rivers mouth, there was upon the ſhoaleſt ten foot water, and then they ſayled up the river, that was wont (for ſome years) to be ſo, but it is poſſibly ſince that time more or leſſe altered, like as it doth oftentimes happen in ſuch rivers.

From the road of the Narve to the Ruſſe-haecks, the Ruſſe- courſe is north and by weſt five leagues, which lye with haecks. many rocks a good wayes off from the ſhoare. The point thwart of it is called the poynt of Caſtrum after a little town (ſo called) lying there.

From the Ruſſe-haecks north 5 leagues lyeth a little Rette- Iſland, called *Rette Sarre*, from which here runneth of Sarre.

a riff ſouth into Sea. *From* this Iſland to the Summers, the courſe is north and by weſt, weſterly 4 or 5 leagues.

Eaſtſoutheaſt and ſoutheaſt and by eaſt from Highland, and three leagues from the Ruſſe-haecks lyeth another ſhoale, called the Slimme grounds, it lyeth long & ſmall alongſt northnorthweſt and ſouthſoutheaſt, with hard wind you may ſee it break in foure or five places: when it is weſt from you about halfe a league, there it is two fathom deep to 3, 4, 5 and 6 fathom uneven ground, ſome of the rocks of it lye alſo above water. Slimme-groun.

From the Ruſſe-haecks to the Rode-hell, the courſe is northeaſt and by north about three and twinty leagues, betwixt them both on the *Ruſſe* ſide, runne alſoo divers rivers into the land, but there is no trade. The land there lyeth in a great bight, it lyeth firſt from the Ruſſe-haecks unto the *River* of Nioa, or Oreſchacke eaſtnortheaſt about 22 leagues, that parteth *Ruſland* from *Finland* by a great Meer or water, called the Lading.

The ſtrong caſtle of Noetenburgh lyeth there alſoo upon a river which lyeth out of the Lyflands or eaſt ſea into the foreſayd Lading. *Further* the land lyeth northweſt, about fifteene or ſixteene leagues unto the Rode-hell. The Lading.

For to ſayle from Revell to Wyburg.

From a little to the northwards of the Kocxſchaer to Highland, the courſe is eaſt and by north a little more eaſterly 23 leagues, with that courſe you runne alongſt a little to the northwards of it. You may ſayle about Highland on both ſides, but alongſt to the northwards of it is the right fare-way for thoſe that are bound to Wybrough, A halfe league northand by weſt from Highland lyeth a ſuncken rock under water. For to avoyd it you muſt ſayle cloſe alongſt by Highland. Further, the lying of Highland hath been deſcribed here before.

From Highland to the Summers, the courſe is eaſt ſeven leagues. Summers is a rock or little Iſland almoſt like the Eartholms, it ſheweth it ſelfe in 3 hommocks. A little to the eaſtwards off it lye ſome rocks above water: you may ſayle about on both ſides of Summers, and alſo through betwixt Summers & the foreſayd rocks that lye to the eaſtwards of it: but about to the northwards of it is the right fareway, you cannot alſo runne alongſt farre to the northwards of it, for a halfe league to the northwards of it, it is very fowle and full of little rocks, ſome above and ſome under water. Summers.

From the Summers to the Goeſchaer, the courſe is northeaſt and by north more eaſterly ſeven leagues. The Goeſchaer which by ſome is called the great Fiſher, is a long & broken Iſland of 7 rocks, therefore it is alſo called the Sevenrocks, it lyeth not far from the land, ſo that you cannot get ſight of it, before that you come nearer it, it ſheweth it ſelfe when you ſhal firſt ſee it, in 4 hommocks, as if it were 4 little low Iſlands, you muſt leave it lying a halfe league on the larboard ſide, for to avoid a ſuncken rock which lyeth of from it ſouthſoutheaſt a great ſhot of a caſt peece. When the water is not very ſmooth, but a little grown, you way perceive it by the breaking of the water: you may alſo well ſayle to the northwards of this ſuncken rock; to wit, through betwixt the ſuncken rock & the Goeſchaer, then you muſt run indifferent cloſe alongſt by Goeſchaer; when it is northweſt and by north from you, then you are paſt the foreſayd ſuncken rock, whether that you run alongſt to the northwards or to the ſouthwards of it. Northweſt and by north behind the greate *Fiſher* you may anchor in a good haven, betweene the cliffes where upon the ſouth Corner of a cliff there ſtandeth a warder, where in if you lye there you are free from all Icedrifts. Goeſchaer of greate Fiſhers.

From the Goeſchaer or great Fiſher to the little Fiſher, the courſe is northeaſt and by eaſt three leagues. The little Fiſher is a bare round rock which lyeth not farre from the land: when you come neere it, you may know it well from the other rockes, becauſe there lye none farre from the land alone, you may ſayle about it on both ſides, but alongſt to the ſouthwards of it the right fareway. About a ſhot of a caſt peece ſoutheaſt, or ſoutheaſt and by eaſt from this little Fiſher, lyeth a black rock with the top even above water, almoſt like a buye upon the Flyeſtreame, to ſee to a farre off as if it where a Seales head. This rock you muſt leave on the ſtarboard ſide, and run through betwixt it and the Fiſher but there is a piece of it driven off with a ſtrong Icedrift, ſo that as many ſay there is not much feare to bee made of it.

Hee that muſt turne to windwards thereabouts, let him not come very neer this rock, for men doe hold that there lye more rockes by it under water.

Both the Fiſhers are otherwiſe clean round about; ſo that you may alſo finde road under them.

From the little Fiſher to the poynt Corſnes, which the Lubickers doe call Kruyſoort, the courſe is eaſtnortheaſt ſomewhat eaſterly a league. Corſnes is a poynt going off low of the maine land, not very clean, which you muſt leave on the larboard ſide. To the weſtwards of Corſnes lye two little Iſlands cloſe to the land. Thwart of the poynt lyeth a rock allmoſt like a boat, you may runne about by it in foure fathom & a halfe, but not neare. On the eaſt ſide of that poynt you may anchor for Weſterly winds in five or ſixe fathom. Corſnes.

About two leagues thwart off from Corſnes, lye very many rocks, ſome one fathom, ſome a halfe fathom, ſome more, and ſome leſſe under water, you may not goe out of the fareway without great feare and danger. It is impoſſible to deſcribe all the uneven grounds, the great multitude of rocks & rocky ſhoales which are lying thereabouts.

From Corſnes to the Iſland Rodehell, the courſe is northeaſt and by eaſt about three leagues. Rodehell is a greate rough Iſland with a ſaddle in the middeſt, which you muſt leave lying on the ſtarboard ſide. The north poynt is a red poynt, there ſtand up long ſtaves over end, like unto a Warder in Norway, you muſt goe cloſe alongſt by them, or you may runne in amidſt the channell, according as ſhall be beſt convenient, but you may not goe cloſe by the north poynt over againſt it (which the Dutch Shippers doe call Jan Lambertſons poynt) becauſe of a ſtony and ſteepe little riff which lyeth of from it, but you may run about by it upon your lead in ſeven or eight fathom, but may come no neerer; the right fareway betwixt them both is fourteen and fifteen fathom deep. Rode-hell.

Betwixt the poynt of Corſnes & the Rode-hell, it is not without danger to turn to windwards, eſpecially you muſt be very carefull not to run to far over to the ſouthwards, but to the northwards, towardes the maine land it is indifferent cleane: It is there in the fareway fifteen fathom deepe, ſoft clay-ground.

For not to miſſe this foreſayd channell; or the north poynt of the Rode-hell, then take the mark out a ſtearne of the little Fiſher, bring that even without the poynt of Corſnes, & keep it ſo ſtanding ſayling towards the Rode-hell, and ſo you ſhall not ſayle to fal right before the channell. This is a ſure mark whereupon you may truſt. If you fall ſomewhat to the ſouthwards of the foreſaid channell, you can ſee opening, but ſeemeth to be all whole to the maine land, ſo that men (that are not well acquainted) might not know where to ſeek the channell, but ſayling to the northwards the channell doth open it ſelf.

When as you ſhall be then within the foreſayd poynt of Rode-hell, you may anchor there where you pleaſe, & fetch a pilot from the land, which may bring you up to the towne Wybrough. It is there within fifteen fathom deep, and good ſoft clay-ground.

If you wil (being come within the Rode-hell) ſayle up to Wybrough, then goe on eaſt and by ſouth a ſhot of a caſt peece unto a black poynt, leave that about 2 cables lenghts on the larboard ſide, for there it is not cleane. Being a little paſt this black poynt, then go on northeaſt,

or

or eaſtnortheaſt a halfe league, and then you ſhall come againſt a great white ſand-bay, but before you come by this ſand-bay, you ſhall meet a rock with a gray ſtone like a buye upon the Fleyſtream, leave that foreſayd rock on the ſtarboard ſide, and the gray ſtone on the larboard ſide, and run amidſt the channell through betwixt them both, there it is three fathom deep. It is in no wiſe to bee done to ſayle up there for him that hath not been there before, but it is beſt to anchor a little within Rodehell & to let him be brought up by a Pilot.

The Coaſt of Finland betwixt Elſevos, and Wybrough.

The Channell of Elſevos lyeth from Narghen or the Wolfe northeaſt and by north & ſouthweſt and by ſouth about ſeventeen leagues, and from Wranger ſouth and north.

Upon the weſt ſide of the channell lyeth a high round rocke, whereupon ſtandeth a maſt, or Warder, called Kubben, over againſt upon the other ſide of the channell lyeth a long rocke or Iſland called Sautum, & an halfe league to the eaſtwards of Kubben lyeth another great round rock called Mely. Theſe three rockes are the beſt markes to be know of this foreſayd channell.

Kubben. Sautum. Mely.

Betwixt Kubben and Sautum lyeth that channell in from thence northeaſt untill that you bee within the rockes, and then northnortheaſt and north and by eaſt, untill you come before the river of Elſenvos, there you may anchor betwixt the rockes in good anchor ground.

Elſenvos.

There runneth alſo a Lieth through within the rockes, where you may ſayle alongſt, and come out againe into the ſea by Putsfagre, this runneth about very crooked with many bights, but it is Pilots water.

Borgo.

If you will ſayle to Borgo, then runne a league to the eaſtwards of the foreſayd rock Mely, there you ſhall finde two high bare rockes, called the Tolcken, runne in betwixt them both, but neereſt to the eaſtermoſt, which is cleane and cleare cloſe to it, and lyeth ſomewhat further to ſeawards then the weſtermoſt. Weſtnorthweſt from this eaſtermoſt high rocke, lyeth a little rocke above water, leave that on the larboard ſide. When as then you ſhall be by this eaſtermoſt rock, which you leave lying on the ſtarboard ſide of you, then goe on northnortheaſt to *S*choeland, that is a rough Iſland off from which lye many bare poynts, all which you muſt leave (with the Iſland alſo) on the ſtarboard ſide, then runne alongſt cloſe by theſe bare poynts. When you are paſt them, goe then northeaſt and by north ſomewhat eaſterly, and ſo you ſhall ſee twoo other bare rockes, the eaſtermoſt of the greatneſſe off a ſhip very ſteepe and high, but the weſtermoſt is ſmall, run in there betwixt them: the *S*ound is called Cramerpoort. When you are within them, goe then in north and by eaſt, and then you ſhall preſently meet with a greate Iſland called Cramer, leave that on the ſtarboard ſide, and ſo you runne right on with an other greate Iſland, called the Heſter, leave that on the larboard ſide, and anchor betwixt the 2 Iſlands Cramer & the Heſter, there is good anchor ground.

Cramerpoort. Cramer.

From the mouth of the Sound of Elſenvos to Peltingſound, the courſe is eaſtſoutheaſt 13 or 14 leagues. Peltingſound lyeth in northeaſt, there you lye within a great many great rockes, or little Iſlands, ſheltred for all winds. You may ſayle from thence through within the rocks all over where you deſire to be, if you have a good skilfull Pilot.

Pelting-ſound.

From Peltingſchares to Putsfagre it is 8 leagues. Putsfagre is a great rock, or Iſland, lying from High-land northnorthweſt diſtant five or ſixe leagues. About a league ſouth from this Iſland Putsfagre lyeth a ſuncken rock, which you muſt avoyd. He that will ſayle through within the rocks, let him take a Pilot from Putsfagre, that may bring him through the rockes where hee deſireth to be: you may run in there every where, and within the rockes it is moſt all over good anchor-ground.

Putsfagre.

From Putsfagre to the Epelſchares, the courſe is eaſt ſix leagues: theſe are a great many out-rocks, a little to the eaſtwards of them lyeth a great rock called Quadeſchare which you may ſayle round about.

Eſpelſchares.

From Epelſcharen to the Goeſchare, the courſe is eaſt ſomewhat northerly 9 or 10 leagues. That, & the lying of the land, & dangers from thence eaſtward, hath beene deſcribed here before.

Goeſchare.

How theſe lands doe lye one from the other, and from other lands.

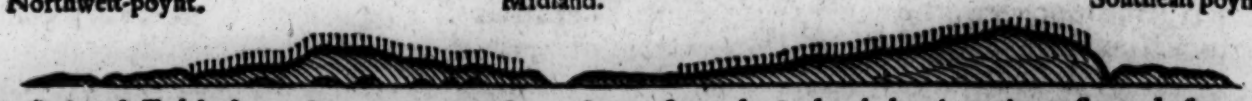
From the Wolf to the Kocxſchaer eaſt and by north 3 leagues.
From Wolf to the Peltingſchares eaſtnortheaſt 20 leag.
From Wolf to Wranger eaſt and by ſouth 3 leagues.
From the Kocxſchaer to the eaſt end of Wranger, ſouth and by eaſt 1 league.
From the Kocxſchaer to little Wranger ſouthſoutheaſt, 2 leagues.
From Wranger to Eckholm eaſt and by ſouth 14 leag.
From Eckholm to the Caſtle of Telſburgh eaſtſoutheaſt, 5 leagues.
From Telſburgh to the roade of the Narve e.ſ.e. 15 leag.
From the road of the Narve to the Ruſſe-haecks north & by weſt 5 leagues.
From the Ruſſehaecks to the River Nioa, or Oreſchack, eaſt northeaſt 22 leagues.
From Oreſchack to the Rode-hell north w. 15 or 16 leag.
From Rodehell to Schares terny ſoutheaſt 10 leagues.
From the Ruſſehaecks to the Rodehell n.e. & by n. 23 lea.
From Ruſſehaecks to the Iſland Rette Sarre north 5 leag.
From Rette Sarre to Sommers, n. and by w. ſome-what weſterly 4 or 5 leagues.
From Eckholm to the Iſland Highland e.n.e. 10 leagues.
From the weſt ſide of High-land to the road of the Narve ſoutheaſt and by ſouth and ſoutheaſt 15 leagues.
From Highland to the little Tutters ſouthweſt and by ſouth 3 leagues.
From Highland to the great Tutters ſouth 3 leagues.
From the Iſland with Maſt to the little Tutters eaſt by ſouth and eaſtſoutheaſt 3 leagues.
From the Kocxſchaer to the Iſland with the maſt eaſt and by ſouth 18 or 19 leagues.
From the Iſland with the maſt to the Highland northeaſt and by eaſt 4 or 5 leagues.
From the Kocxſchaer to high land eaſt 23 leagues.
From Highland to the Sommers eaſt 7 leagues.
From the Sommers to the Goeſchaer or great Fiſher, northeaſt and by north ſomewhat eaſterly 7 leagues.
From the great Fiſher to the little Fiſher northeaſt & by eaſt 3 leagues.
From the little Fiſher to the Corſnes eaſtnortheaſt ſomewhat eaſterly 1 league.
From Corſnes to the Rodehell northeaſt & by e. 3 leag.
From the ſound of Elſenvos to Pelting ſound eaſtſoutheaſt 13 or 14 leagues.
From Pelting-ſound to Putsfagre eaſt 8 leagues.
From Putsfagre to the Epelſchaers eaſt 6 leagues.
From the Epelſchaers to the Goeſchaer or great Fiſher, eaſt ſomewhat northerly 9 or 10 leagues.
From Eckholm to Elſenvos northweſt & by north ſomewhat weſterly 23 leagues.
From Highland to Peltingſchares northweſt & by weſt 9 leagues.
From Highland to Putsfagre northnorthw. 5 or 6 leag.

How theſe Lands doe ſhew themſelves at ſea.



The Iſland Wranger ſheweth thus, when it is ſoutheaſt and by eaſt 3 leagues from you.

Northweſt-poynt. Midland. Southeaſt poynt.



Thus ſheweth Eckholm, when you come from the weſtwards, & that it lyeth to the eaſtwards from you.

Southeaſt poynt. Northweſt poynt.



Thus ſheweth Eckholm, when you come from the eaſtwards, and that it is to the weſtwards from you.



In this forme ſheweth the Iſland th Huſtes, when you are to the ſouthwards of it, and ſayle alongſt by the coaſt of Lyfland.



The little Tutters ſhew themſelves thus, when they lye to the northwards from you.



Thus ſheweth the great Tuttors, when you ſayle alongſt by the coaſt of Lyfland, and that they lye to the northwatds from you.



Thus ſheweth the land to the eaſtwards of the Rivers mouth of the Narve, when you come thereabouts, comming off from the High-land.



In this forme ſheweth the land to the eaſtwards of the Narve, when you come of from the High-land.



Thus ſheweth the Iſland High-land, when you ſee it comming from the weſtwards.

The fifth Demonſtration,

Where in

Are ſet forth the Coaſtes of Sweden, betweene Oeland and Stockholm.

Borckholm. Copingwyke.

ABout two leagues more northerly over againſt it, on Oeland lyeth Borckholm, a little to the northwards of it lyeth Copingwyke, where men do lade many Toomb-ſtones and other ſtones, with a northerly winde it is bad lying there.

Northweſt, or ſomewhat weſterly from Borckholm, about 3 leagues on the Sweeds ſide, lyeth a Haven in the rockes, where men do lade Beames, to the northwards of it northweſt and by north from Borckholm lyeth Munſteraas, that is a good Haven alſo for very great ſhips.

Munſteraas. Sweeds Ioufer.

From Calmer to the Sweeds-Ioufer, the courſe is northnortheaſt 9 or 10 leagues, this is a round rock, and very high, you may ſee it alongſt over Oeland, being a good wayes to the eaſtwards of Oeland, it is not very great, but cleane round about, ſo that you may anchor neare under it on every ſide in 18 & 19 fathom, but by reaſon that it is not broad, there commeth in (with hard windes) a rowling Sea.

From the Sweeds-Ioufer to the channell of Weſterwyke, or Silbuy, the courſe is northnorthweſt 7 leagues, but from Northeroorden the north-end of Oeland northweſt 8 leagues.

The channell of Weſterwyke and Silbuy is called Idefound, after a great rock lying on the north ſide of this channell, called Ydehoe, off from it lye many rocks, ſome above and ſome under water 2 great leagues to ſeawards, which are called Idebanks.

Idefound. Idebanks.

He that will ſaile from the north-end of Oeland towards the barſound, and by bare winds doth come little to the weſtwards, without the right fareway, muſt be very carefull, and take good heed that he get not in amongſt them.

For to know the channell of Weſterwyke, you ſhall ſee a high bare rock, bring that northweſt from you, and ſaile ſo right in with it, & then you ſhall fall with the land right before it, & then alſo you ſhall eſpye another bare rocke, whereupon ſtandeth a *Fiſhers*-beakon, and alſo another to the ſouthwards of it, with a maſt, ſayle in betwixt the two rocks, the channell lyeth in northweſt and northweſt and by north: when you are come within them you may ſayle alongſt through the rocks where you deſire to be, to Silbuy, Strixholm, *Flourbuy*, Vrouwenbergh, Weſterwyke, up to the northwards to *Schelſuyr* and other places more, there it is all cleane ground, and 12, 15, 18, and 20 fathom deep.

If

Stuy der Coppen

Stickholm

Ide bancken

Ide hoe

't gat van Westersyck

Westersyck

Flmierbuy

I. Vron: wenbergh

Sälbuy

Stickxbergh

Hondsbuy

Groen Eylandt

Wahersyck

Sphenckens

Mosserwaer

't Swedtsche Lonsser

De Backer

Noorder goorden

Lopingsyck

Borcholm

OELAND

Groote Karel

Cleine Karel

Westhoeck

Bosvyck

Hoeburch

Wisbuy

GOTLANDT

Narvyck

Sandsyck

Gulpt

Caarte van SWEDEN Van Oelandt tot aen Stocholm.

Nycoppen

Stocholm

Hasselholm

Troſa

D E N

Herſhoc

Heirhamer

Carlſtein

Copersteen

Shetlanden

Faro

Salsomreyn

Goſsche ſandt

Duytſche mylen 15 in een graadt

Spaanſche mylen 17½ in een graadt

Engelſ. en Franſ. mylen 20 in een graadt

Op Iarma
woonen vier boeren
ghy cryght hier wel een
Loots man.

IARMO

Hier leggen Vysschers van Paesschen
tot Amsterdamsche kermis

OTTOY

Die Riff schiet wel twee mylen in 't zee
desen Hoeck/ omnait het Lande Oostwaert

Grauwerx sondt

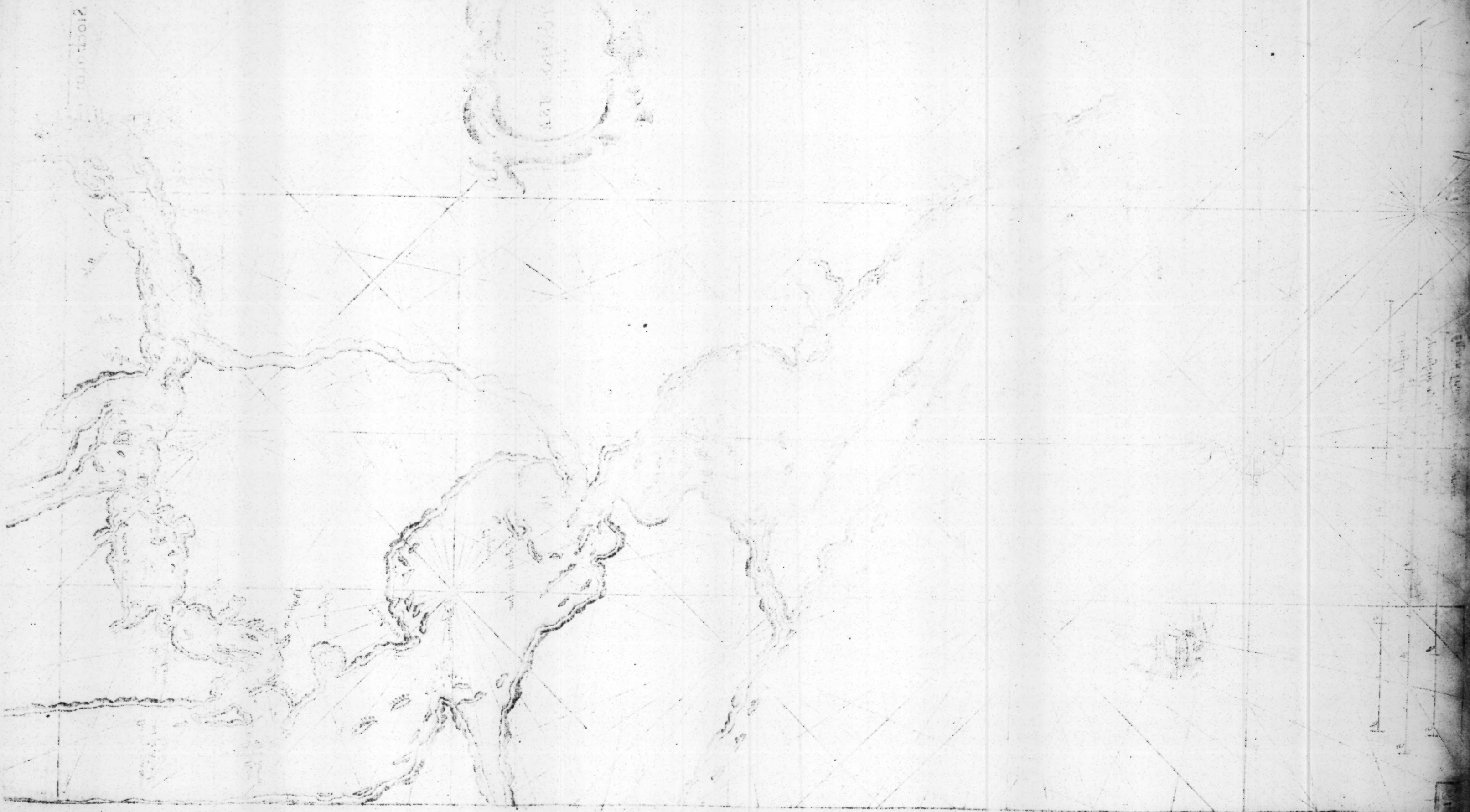
Caarte vanigat
van
ABBO, ofte VTTOY.

Dit syn de Misshoopen ende
syn seer kenlyck

Duytsche mylen 15 in een graat
Spaensche mylen 17½ in een graat
Eng. en Fra. mylen 20 in een graat

Caarte
van
STOCHOLMSE
Liet.

Stocholm
Lustholm
Raedholm
Meysholm
Wijsbarrack
Seegrund
Seegrunds
Wecsholm
Seuge
Buy van Duynhaven
Dit heen vaerjmen na de Noord: bodem
Tijgshoorn
Berc: haven
Draybom
Crnysshaven
Roshaven
Roshaven
Claymuts
Eylandt Steendeur
De Harp Reck
Sousack
Groote Daler
Daler
Raedholm
Roodholm
Hooge Lande van Elsnas
Elsnas
Rookoe
Middelsteen
Schaeropen
Gombaroffsteen
Landsoort
Wijsteen
Ionge Carwasen
Carwasen
Keyhamer
Duytsche mylen 15 in een graat
Spaensche mylen 17½ in een graat
Eng. en Fra. mylen 20 in een graat



If you be bound to Silbuy, then ſayle up to the northwards or eaſtwards untill you come before the Towne, and anchor there in the middeſt between the rocks in 7, 8 and 9 fathom.

If you be bound to Flourbuy, or Vrouwenbergh, then ſayle in weſt, and weſt and by north through the rocks till you come againſt the maine land, there you may anchor before Flourbuy, or ſayle up northweſt betwixt the Iſland of Vrouwenbergh and the maine land, and anchor there in 12 fathom. alſo you may run through that way untill you come to Weſterwyke. Weſterwyke lyeth from Silbuy through within the rock weſt, and weſt and by north, there it is in the fareway fifteen & ſixteen fathom deep.

From Silbuy to Schelſuyr it is north and by weſt ſeven leagues, all alongſt through within the rocks. Schelſuyr is a good haven, there lyeth a rock in the havens mouth, about which you may run in on both ſide, and anchor before the Towne.

To the eaſtwards of Schelſuyr lyeth the Hondtsbay and the Green Iſland, there it is alſo good anchoring. You may run from Silbuy alongſt by it untill you come in the Sound of Southercoppen and Northcoppen.

From the channell of Weſterwyke to the Barſound, the coaſt lyeth alongſt by the rocks north and by eaſt 9 leagues. But from the north end of Oeland to the Barſound the courſe is north and by weſt 15 leagues, go not more weſterly, that you get not into the ſunken rocks and foule grounds of the Idebanks.

The north end of Oeland runneth ſomewhat far off flat. If you run out cloſe by Oeland, and ſaile on north & by weſt, then you runne alongſt farre enough without the Idebancks, and ſo ſhall fall with the land about a halfe league to the ſouthwards of Barſound againſt a deal of low out-rocks. It ſeemeth a far off (by reaſon of the multitude of rocks and little Iſlands to be all firme land, but comming near it, it is all broken. You ſhall ſee there alſo an Iſland by which there ſeemeth to be a channell, but you muſt be further to the northwards, run alongſt by the coaſt in 7 fathom, ſo long untill that you ſee out a head an high out-rock, theſe ſhall be the Heerſcharen, which are very foule, and lie off from the north point of the channel, a good wayes eaſtſoutheaſt into ſea, all which you muſt leave on the ſtarboard ſide and run alongſt by them unto the channell.

When as you come out of the ſea, you muſt take very greate heed that you fall not with the land to the northwards of the channell, that you do not run into the foreſayd Heerſcharen. When you come before the channell, you ſhall ſee 2 Sound or going in, the ſouthermoſt ſeemeth to be the broadeſt and faireſt, but the northermoſt is farre the beſt, and lieth in northnorthweſt.

On the north ſide of the channell lieth a great rock with a beakon upon it, and ſomewhat more to the northwards ſheweth a round hill, by all which markes this channell is very eaſy to be known, when you are right before the norther channell, and do ſee open into it, then ſayle in northweſt; being come in about a ſhot of a caſt peece, you ſhall ſee on the larboard ſide two little low Iſlands, anchor within them in ſeventeen or eighteen fathom, there you muſt hire a Pilot to bring you up, either to Southercoppen, or Northercoppen, where you deſire to be, it is Pilots water. It is from thence to Southercoppen, about ten leagues, but to Northercoppen eighteen leagues. In the comming in of the Sound is good anchor ground in ten fathom. Within in the Sound it is broad and wide, and all over good anchoring in 18 and 20 fathom.

About an Engliſh mile within the Sound, you leave (in ſayling up) the Talderſound on the larboard ſide, there is no more then 6 or 7 foot water, from thence you edge up north and alſo northeaſt a half league, then again weſt and by ſouth about 2 league, afterwards weſtnorthweſt a league unto Karholm, which is a Gentlemans houſe with a mill.

From Karholm to Stickbrough is further weſt about two leagues, that is a caſtle upon a little Iſland, you muſt go about to the ſouthwards of it through a bridge.

From Stickbrough ſayle up alongſt the Sound, & leave moſt of all the rocks (which you ſee) on the larboard ſide, except one or 2 a little above Stickbrough, leave them on the ſtarboard ſide. About 2 leagues paſt Stickbrough ſtandeth a Gentlemans houſe called Mem, there is the place where men do lade, a half league from Southercopping. Stickborgh.

For to ſayle from without the Northercopping, you run in by the Swartbodem up weſtwards unto Schenes and Braburch, and alongſt unto the Brawyk the ſound of Northcopping, or elſe you muſt come in at the Barſound through within the rocks into the Brawyke unto Northercopping, but it is not to be done without a Pilot for them that are not there very well acquainted, for it is Pilots water. Brawyke.

From the north end of Oeland to the channell Nycopping by the Hevering, the courſe is due north about 18 or 19 leagues, but if you run cloſe alongſt by the end of Oeland, you ſhall fall with the land a little to the weſtwards of the Hevering. The Hevering is a great reddiſh bare rock, whereupon ſtand 3 or 4 Fiſhers beacons, heretofore there was wont to ſtand upon it a barrell upon a maſt, which men might ſee far of at ſea, but it is taken off in the laſt wars between the Kings of Sweden and Denmark, now there ſtandeth nothing upon it but ſome Warders. Hevering.

Two great leagues to the weſtwards of the Hevering, to witt, ſouthweſt from it, lye the foreſayd rocks called the Swartboden, which are great rocks, & are ſometimes miſtaken for the Hevering, you may ſayle in alſo by theſe Swartboden, and run through within Oxelen and the other rocks, & come by the poynt of Hommelwyke into the right ſound of Nycoppen. Swartboden.

When you come before the channell of the Hevering, you can at firſt hardly ſee a channell, or any opening but bring the great rock the Hevering northweſt from you, & ſayle ſo right in, and run in cloſe alongſt to the northwards of it. In the ſayling in you ſhall ſee two channells, the northermoſt is within full of dangers, ſo that you cannot go through there. The right channell by the Hevering is ſo narrow, that you can hardly turne too and again there.

From the Hevering you muſt ſaile in firſt n. w. a league and half, or 2 leagues, unto a great rock, leave it on the ſtarboard ſide, & ſayle about by it, & goe in alongſt n. w. & by north. A litle within the foreſayd great rock, thwart of the poynt of the Hommelwyke, you ſhall finde alſo a great rock on the ſtarboard ſide, you may run about to the weſtwards of it untill you come within the other rocks & little Iſlands, and anchor there in 3 fathom ſoft ground: but if you wil anchor there, then you muſt ſhun ſomewhat the w. end of the great Holm, becauſe of a ſuncken rock that lyeth even without the poynt of the rock. From that foreſayd road unto Haſſellholm the courſe is yet in alongſt n. w. and north, but with ſhips of great draught you muſt anchor before the channell of Haſſelholm. From the Hevering to the Haſſell-holm it is in all about 3 or 4 leagues. Hommelwyke.

From Haſſell-holm alongſt upwars through the ſtone reach, it is not deeper then nine foote, you muſt alſo (if you will ſayle up there) firſt ſet the rocks, or ſuncken rockes with beakons with your boat; or elſe you ſhould ſometimes ſayle upon ſome of the rockes in ſeven foot depth. The narroweſt of the Stone-reach is thwart of an Iſland which you muſt leave on the ſtarboard ſide, off from which lyeth a ſuncken rocke in the narrouw, you muſt goe cloſe alongſt by the ſuncken rock, for to the weſtwards of it is very ſhoale water. Being paſt this ſtony ground, you ſhall get oaſie ground, where it is not deeper then ſixe foot; being come over that by the town Nycopping, it is again eight foot deep, but ſtony ground. The ſhips lye without the towne thwart of the beakons over Haſſellholm. Stonereach. Nycopping.

over against the Castle, which lyeth on the west side of the river.

From Hassell-holm to the town Nycopping it is about a league first up northand by w. and afterwards west. *For* one that is unacquainted, it is not easy to sayle up, it is also Pilots water, so soone as you come within the channell, you can get a Pilot to bring you where you desire to be.

From Nycopping you may sayle alongst through the rocks to the northwards off Hassell-holm unto Trosa and Telghen.

Landsoort. Landesoort (which is the west poynt of the Liet of Stockholm) lyeth from the Hevering east and by north distant 6 or 7 leagues.

Hartsoe. About halfe wayes betwixt both lyeth a great high rock very easy to be knowne, a good wayes without the land alone, called Hartsoe, and a little league to the westwards of Landsoort lye also some fowle out-rocks, called the Heyr-hamer. When as you sayl from the Hevering on eastnortheast, then you run alongst a little without the Hartsoe, leaving it on the larboard side. With that course, you cannot also sayle too neere the Heyr-hamer and then you leave it lying also on the larboard side towars the land.

Heyr-hamer.

The land to the westwardes of Landsoort lieth w. or w. and by north with divers great rockes and havens where you may sayl into. About a league to the westwards of it lyeth a haven within a low rock in betwixt two other low Rocks, there you must make you fast with cables on both shoares, and with an anchor in the Sound. Before the havens mouth lyeth a high round rock, which shutteth the havens mouth.

A little to the westwards off Hartsoe goeth in a haven or Deep, where you may run through with Barkes within Elsnap unto Stockholm.

A little to the westwards of that Deep lyeth the Sound of Telghen lying in northwest, allmost unto the great Lack de Mell, upon the end of that Sound lyeth Telghen, but at the mouth of the Sound lyeth a little towne Trosa.

About an English mile southwest from the poynt of Landsoort, lye 2 rockes even with the wather, and within these rockes close by Landsoort liethalso a suncken rock. He that commeth from the southwardes, being bound to Stokholm, and falleth with the land to the westwards of the poynt of Landsoort, must take heed off them; you may sayle within these two rockes (lying even with the water) to wit, betwixt them & the foresayd suncken rock, and also (as Pilots say) you may sayle through within the suncken rock, that is, betwixt the suncken rock and the maine land.

Landsoort and the north poynt of Oeland lye southsouthwest and northnortheast a little more northerly, and a little more southerly distant 23 or 24 leagues. If you sayle on northnortheast from the north end of Oeland, you shall fall with the land right with Landsoort, or a little to the eastwards of it. It is better to fall with the land somewhat to the westwards of it, then to the eastwards of it, to the westwards the land is better to be known then the rocks to the eastwards off it. Therefore whenas you will sayle from the north end of Oeland to Stockholm, especially in darck weather, goe on somewhat more northerly then n. n. e. or north & by east, & then you shall runne in sight off the foresayd rock Hartsoe, which is easy to be knowne.

The Liet of Stockholm goeth in northeast by the poynt of Landsoort. About a league east from the point ly some black rocks, some above and some under water, called the Karwasen. Betwixt them and the poynt, about once so neare the Karwasen, as the poynt, lyeth an other black rock, not great called the young Karwasen, betwixt that rock and the poynt of Landsoort, men doe sayle into the channell of Stockholm. Close to the poynt lyeth also a little Island which you must leave on the larboard side, and run alongst to the eastwards of it, a league northeast from the poynt lyeth the Wigstone, lying southeast or eastsoutheast thwart of from the shoare. This is somewhat a long rock with three hommocks, the two westermost are the greatest, and shew like a saddle, the eastermost hommock is the smallest, upon it standeth a little walled cape, you must sayle alongst to the eastwards of it, and leave the rock on the larboard side. You may well sayle also about to the westwards of this Wigstone, it is cleane round about, but on the west side it is narrowest, betwixt it and the land lyeth also a rock, with a little rock off from it, which you must avoyd.

Wigstone.

A league northeast from the Wigstone lyeth the Middlestone, which is a great high rock with a great cliff or saddle, with another great rock a little to the westwards of it: you cannot sayle through betwixt them, they are fast one to the other with rocks. In sayling up men leave this Middle-stone on the starboard side, and run about to the westwards of it.

Middlestone.

From by east the Wigstone to the Middle-stone, to witt, alongst to the westwards of it, the course is northnortheast. About a great English mile east from the Wigstone, and north from the Karwasen lyeth another rock, called the Gomberg-stone, and to the eastwards of it another, called Schaeropen. When you sayle from the Wigstone to the Middle-stone, you leave them both on the starboard side.

Gomberg-stone.

Thwart of the Middlestone, on the Westland lyeth the haven of Ramskloof, there yon may anchor within the rocks. The Middlestone lyeth about a half league southwest from the east poynt of the Lieth, to witt, from the east poynt of the main land, or the Swedes schares, betwixt them both goeth in a channell, called the Danske-channell. For to sayle in there you must avoyd the foresayd east poynt a good wayes off (whereupon standeth a mill) and run in by the Middlestone, for from that poynt runneth off a great ledge off rocks a good wayes to seawards, towards the Middlestone. From by west the Middlestone to Elsnap, the course is northeast three leagues.

Ramskloof. Danske channell.

When you are a little past the Middlestone, you come in betwixt the two lands, and a little within the east poynt you shall meet with a rock in the fareway, called the Red-Cow. You may sayle about it on both sides, but men leave it commonly on the starboard side, within that rock, that is on the northside you may anchor.

Red-Cow.

Elsnap is a haven behinde two little Islands, where the Kings ships off wart do commonly lye to tarry for a winde, when they are bound to sea, there it is very easy lying, when with contrary windes you can neither get up nor down, you can come in and out there both from the northwards and from the southwards very conveniently. Comming from the southwards, you can see over the southermost little Island, the masts off the ships that lye behind it. For to sayle in there behind it, run in about by the south poynt off the Island Elsnap behind it, and then you leave a little black rock on the south side of the havens-mouth, lying on the larboard side. Betwixt the two little Islands of Elsnap runnes also a channel through where you may go through with Huyes and small ships. From thwart of Elsnap, the course is inwards northnortheast about two leagues, to the Red-holm, that is a great Red round rock grown full of trees, to the westwards of it lyeth another smaller bare rock, the fareway is there in through betwixt them, and about a musket shot broad in this narrow it is all over good anchor-ground. From the north end of the Red-holm lyeth of a great row of rocks unto the east shoare of the Lieth, where you must sayle through. When as you sayle through betwixt the Redholm & the foresayd bare rock to the eastwards of it, go then on yet about an English mile further northnortheast untill you come thwart of the fourth channell, counting from the *R*ed-holm which lyeth through the foresayd row of rockes to the northwards of the Redholm, that is called S. Johns channell, it lyeth through about northnorthwest or somewhat more northerly, it is a

Elsnap. Red-holm. S. Johns channell.

is a ſhort Inlet, run through there. Being through S. Johns channell, goe again northnortheaſt about an Engliſh mile to the Red-holm, which is a long rock, upon it ſtand three barrels upon maſts, this you muſt leave on the larboard ſide, and run alongſt to the eaſtwards of it. From the north poynt of that Red-holm runneth of a little riffe or ſhoale, which you muſt avoyd. From the Red-holm unto the great Daler, the courſe is northweſt and by north, that is a haven on the weſt ſide of the Liet, there lyeth a Church-yard within on the land, where the ſlain Poles people in the laſt Poliſh wars lye buried. Thwart of that Church-yard is a Sand-bay, there is good anchor ground, like as is all over in that foreſayd haven. At the north poynt of the haven the great Daler lyeth a ſuncken rock cloſe by the land, called the Saltſack, upon which is no more then nine foot water. From the great Daler, the courſe is alongſt northeaſt, a half league unto the little Daler, which is a high ſteep rock, the higheſt that you find amongſt all the rocks in the Liet, run alongſt to the weſtwards of it, and leave it on the ſtarboard ſide. Over againſt it on the weſt ſide lyeth another rock, which is called alſo the Daler, to the weſtwards of it, to wit, betwixt that rock and the main land, is alſo an opening, where you may ſayl through. A little within that foreſayd rock on the weſtland goeth in the Hartſtick which is a Sound that lyeth in firſt weſt, and weſt and by north, a good wayes in, and then northweſt and commeth into the Liet to the northwards of Waxholm, by Kings haven. The Kings Majeſty hath cauſed to ſink ſome ſhips in the mouth of the Sound, ſoo that men cannot goe through there with great ſhips, but onely with little barks. From the little Daler, the courſe is northnorthweſt about a halfe league to Steendeur, a great Iſland, which you muſt leave on the ſtarboard ſide, and run cloſe alongſt by it, and ſo you ſhall leave a round rock to the ſouthwards over againſt it on the larboard ſide, and ſayle through betwixt them: this channell lyeth through northweſt. At the weſt end of the great Iſland Steendeur lyeth a little black rock, you muſt run about by it again to the eaſtwards.

Red-holm. Great Daler. Salt-ſack. Little Daler. Hart-ſtick. Steen-deur.

From Steendeur to Kow-haven, the courſe is eaſtnortheaſt two leagues, that is a rock lying in the broad Sound, leave it on the ſtarboard ſide, & ſayl to the weſtwards of it alongſt by the weſt land unto Berck-haven. Betwixt both about half wayes lyeth a haven, called the Croſſe-haven, there it is good lying for weſt and northweſt winds.

Kow haven. Berck-haven.

Berckhaven lyeth from Cow-haven northeaſt and by north diſtant about two leagues: this is a haven betwixt two Iſlands where is good anchoring for all winds, as well for them which come from Stockholm, & deſire to ſayle to the Northbodem, as alſo for them that will ſayle off towards Landſoort, there is (like as at moſt places betwixt the rocks and Iſlands) good clay ground. When you come from Kow-haven, and are bound to *Stock*holm, you muſt leave theſe two Iſlands of Berck-haven on the ſtarboard ſide, and run in about betwixt them and the poynt of the maine land. From the narrow betwixt Berck-haven and the foreſayd poynt to Duer-haven the courſe is northweſt about a halfe league. On the ſouthweſt ſide of that fareway thwart of the point over againſt Duer-haven, lye two ſuncken rocks on each ſide of the poynt one, the one on the northweſt ſide, and the other on the ſoutheaſt ſide, commonly there ſtandeth upon each of them a little tree for a beakon.

Duer-haven.

From the poynt of Deur-haven unto the Draybome, the courſe is ſouthweſt and by weſt ſomewhat weſterly about a halfe league, it is called alſo the Duer-haven, of from the poynt with in the Iſlands untill you come before the buye, alongſt there, and alſo within the Iſlands, it is good lying every where.

Dray-bome.

The little Iſlands which lye in the channell of the Draybome, you muſt leave them on the ſtarboard ſide of you.

From the Draybome to the Windſtream, the courſe is firſt north, and north and by weſt untill about halfe wayes, there you ſhall find a little Iſland with a little tree, leave that on the larboard ſide, and goe from thence in northnorthweſt to the Windſtream. In the Windſtream is a good anchoring by the ſhoare, except in the north end of the ſtream there is no anchor ground. From the Draybome to the Windſtream it is about a league diſtance.

Wind-ſtream.

From the Windſtreame to the *Seugh*, the courſe is weſtnorthweſt a half league, that is a chindle or ſtone-banck even with the water, runne alongſt to the northwards of it, and leave it on the larboard. The Seugh.

From the *Seugh* to *Scheggen*, the courſe is weſt and by north a league, run alongſt there by the ſouth ſhoare. When you come againſt *Scheggen*, you ſhall ſee upon the poynt of the ſouth ſhoare a little round tree, over againſt that little tree ſomewhat more northerly then in the middle off the channell, lyeth a ſuncken rock, for to avoyd it you muſt run neareſt the ſouth ſhoare. The reach off *Scheggen* lyeth through weſt, and weſt and by ſouth about an Engliſh mile, it is narrow, but hath every where anchor ground. Scheg-gen.

From Scheggen, the courſe is weſtſouthweſt an Engliſh mile to *Steck*-ſound, or weſt to Kings-deep, the little Iſlands on the ſtarboard ſide, as you ſaile to *Steck*-ſound, are cleane round about, ſo that you may goe on all ſides about by them. Steck-holm.

Comming cloſe to *Steck*-ſound you ſhall finde a ſuncken rocke a little by ſouth the fareway. The Steck-ſound lyeth through ſouthſouthweſt, it is a ſhort Inlet about a cables length long.

From Steck-ſound unto Waxholm it is ſouthweſt weſterly above an Engliſh mile. Upon Waxholm ſtandeth the Kings Caſtle, there all the ſhips are viſited whether they go up or down, the channell there by it, is paled to ſo neare, that they can ſhut it with a barre. Wax-holm.

From Waxholm to the Weſter reach, the courſe is weſtſouthweſt and through the Weſter reach ſouthweſt. *From* thence alongſt weſt to Eeldam, that is a very narrow channell a little more then a ſhips length broad. Weſter reach.

From Eeldam, the courſe is weſt to Mouſeholm, which is about a league from Waxholm, men leave the high rough Mouſe-holm on the ſtarboard ſide, and run alongſt by it to the ſonthwards. Eel-dam.

From the Mouſe-holm to Kings-haven it is a league weſt, and weſt and by north all alongſt by the ſouthland. Mouſe-holm.

From Kingſhaven unto to town Stockholme, the courſe is northweſt, and northweſt and by weſt, alſo a league diſtance along by the ſhoare. When you come before the Towne, you may anchor where you pleaſe. Kings haven.

He that falleth to leewards, or by any other accident cannot come by Landſoort into the Liet of *Stock*holm, he may ſail in more to the northwards through divers channels. Amongſt others there is one where men may ſayle into, and come by the great Daler into the Lieth: there goeth another in by the Swedes-ſand, through it men come by Berck-haven into the Lieth. The knowledge off this channell is a very high rock, with another that is not ſo high, thereby to the ſouthwards of it, betwixt theſe two rocks goeth in this channell, it is very narrow in the comming in, not above two ſhippes lenghts broad. *So* ſoon as you come in within there rocks, you may edge up about by the loweſt, which is the ſouthermoſt, and anchor under it in very good anchor ground. Stock-holm.

From that road in the *Swedes* ſands the *Sound* goeth up firſt about n. w. & by north, & n. weſt, 5 leagues unto Berker-haven into the Lieth of *Stock*holm. This is very eaſy channell as well for to ſayle in as out, but becauſe it is not eaſy to bee known, comming in out the ſea, it is ſeldom uſed.

To the ſouthwards or the weſtwards off theſe two foreſayd rocks, at the comming in of this channell, it is all low land. If you come from the ſouthwards, and run

alongſt by that low land, ſo long untill that you begin to get the high land, you ſhall alſo run in ſight of theſe two foreſayd hommocks. About a league to ſeawards from them, lye three or four ſmall rocks; for to ſayle in there you muſt leave them on the ſtarboard ſide, and in ſayling out on the larboard ſide.

From the ſouth-end of Oeland to the ſouth-end off Gotland, the courſe is eaſtnortheaſt and northeaſt and by eaſt three end twentye or foure and twentye leagues, but to the Karels northeaſt ſomewhat northerly ſeven and twenty leagues.

The courſe alongſt the fareway e, for to ſayle from the ſouth-end of Oeland through betwixt Oeland and Gotland, is northeaſt & by north.

The Iſland Oeland is twentie four leagues long, and a league and half broad, when men ſayle alongſt by it, they may counte eighteene towards upon it, which are all flat: the eaſt coaſt is a clean coaſt, & lyeth northnortheaſt & ſouthſouthweſt, but about 7 or 8 leagues to the ſouthwards of the north-end, there ſhooteth off a little riffe, thwart from the land a great half league into the ſea, which men muſt avoyd: by it goeth in a little haven, where indifferent ſhipps may goe in, otherwiſe Oeland hath no havens.

From the ſouth end of Gotland runneth off a foule ſtonie riffe, a good wayes in to the ſea, you may run about by it upon the lead in ſeven, eight and nine fathom.

The Karels are two little high Iſlands, lying on the weſt ſide of Gotland north and by weſt about ſeven leagues from the ſouth poynt of Gotland, and eaſt and weſt about a halfe league one from the other, the greateſt is called the greate Karell, and lyeth a great league from the land, the ſmalleſt the little Karell, & lyeth about a halfe league from the ſhoare. When you come from the ſouthwards, the greate Karell ſheweth it ſelfe in two hommocks, and the little Karell in one hommock, and nearer to the land. Under the little Karell is round about good roade, in eight, nine, and ten fathom, and is round about clean and cleare, without foule grounds. Men doe anchor betwixt it and the land, in ſixe or ſeven fathom, there it is good lying for all winds, as well for them that are bound to the eaſtwards, as to the weſtwards. He that ſhall be to the northwards of Gotland, and ſhall get a contrarie wind, may alſo anchor under the great Karell, but under the little Karell is farre the beſt roade. Under the great Karell men may anchor, on the weſt and eaſt ſide, but on the north and ſouth ſide it is foule, therefore come no nearer it by night, then in eleven or twelve fathom. Betwixt the two Karels it is thirteen and fourteen fathom deep.

The great Karell.

Little Karell.

About half wayes betwixt the Karels & the ſouth end off Gotland, ſouthſoutheaſt from the Karell, lyeth the haven Boſwyke: thwart of it runneth off a riffe, an the north ſide of the haven a good wayes from the ſhoare, come no neares it then in ſeven or eight fathom. When you are thwart of the ſouth poynt, about a halfe league from the land, and will ſayle alongſt to the northwards of Gotland, you muſt not ſayl on more northerly then northweſt, as well for to avoyd that riffe of Boſwyke, as for to ſayle a weather the Karels.

Boſwyke.

Four leagues northeaſt from the Karel, lyeth the Iſland Reefholm, thwart of it men doe runne into Weſtergorte: you may ſayle and anchor round about it. A little to the northwards of it lyeth the northweſt poynt of Gotland.

Reefholm.

Two leagues to the northwardes of the high poynt lyeth the towne Wiſbuy, about ſeven leagues northeaſt from the Karell. Men were wont in old tyme to lye there behinde a greate head or Cheſt.

Wiſbuy hath beene in tymes paſt a famous marchant towne, where was wont to be driven greate trade of marchandize, but it is now through the will of God, altogether fallen down, and come to nothing. The Hance towns have a long time there held their ſtaple. The old Sea laws were made there, and alſo the old famous Read-carde. Men may ſee yet to this day many old ruinous houſes of coſtly marble and hewen ſtones, whereby men may partly perceive and Judge, what manner of ſtalteniſſe there hath been.

Wiſbuy.

From Wiſbuy the coaſt lieth forth northeaſt & by eaſt towards the end of Gotland about nine leagues. But from the Karell to Gotſhe ſand, the courſe is northeaſt one & twenty or two and twenty leagues: there is a little Iſland, whereupon dwelleth no people, and ſtandeth full of trees: you may ſayle round about it, which hath a white ſtrand. From the northweſt point thereof ſhooteth off a little riff, and likewiſe one from the ſouth point, a good wayes off into ſea, towards the north end of Gotland. On every ſide of Gotſche ſand, you may anchor in ſix, ſeven, eight, nine, ten and twelve fathom, and clean and good anchor ground, but theſe foreſayd riffes you muſt avoid. It lieth northnortheaſt ſix leagues diſtant from Faro, the north end of Gotland, when you ly there under it at anchor, you cannot ſee Gotland.

The Copper ſtone lieth from Gotſche ſand northweſt and by weſt diſtant three great leagues.

Upon the ſouth end of the eaſt ſide of Gotland ſtandeth a high tower, called Houbrough, and there after the ſouth end of Gotland alſo is called Howbrough. By it goeth in a little river, before which you may anchor in ſix or ſeven fathom.

Five leagues northeaſt from the a foreſayd ſouth poynt lieth Heyligh-holm, which is a good haven, but by reaſon it is but little uſed, it is therefore alſo but little known.

Two leagues to the eaſtwards of Heyligh-holm lieth the haven of Narwyck, upon the eaſt ſide of the Haven lyeth a long rock, by which you muſt run in, and leave another ſharp rock on the larboard ſide, within the haven you may anchor in four or five fathom.

Two leagues to the eaſtwards of it lyeth Sandwyck which is a good haven for a weſt, northweſt, northeaſt, and ſoutheaſt winde, and lyeth in about north, a ſouth winde bloweth there open in: On the eaſt point, (which is a low bare point) lyeth a Holme, which is faſt to the land, upon it ſtandeth a Warder: From this point runneth off a little ſandriffe, which you may ſound about in five or ſix fathom. Within at this Holm is a bridge of Maſts which lyeth off a little from the ſhoare. If you will anchor there in the Haven, then run in alongſt by the eaſt ſhoare, untill you come within the bridge, and anchor there neareſt the ſhoare, ſo that the foreſayd eaſt poynt do ſtand ſoutheaſt, or ſoutheaſt and by ſouth from you, in four fathom, four & an half, or five fathom, there is cleane clay ſand ground, and very eaſy lying for weſt, north and eaſt winds.

A leagues to the eaſtwards of Sandwyck lying the Iſland of Eaſtergore, about halfe wayes betwixt both the ends of Gotland n.e. from the ſ. w. poynt, this is a bare Iſland without trees. Under this Iſland is very eaſy road for all windes, as wel for them that are bound to the eaſtwards, as to the w.wards. Comming from the weſtwards, or from Sandwyck alongſt by the land, then is the n. w. poynt, (which is a high bare gray point) hidden behinde a point of the maine land of Gotland, ſo that it ſeemeth a farre off to be no Iſland, but comming near it, it openeth it ſelf, that you may ſee large enough through betwixt them: ſayle in there betwixt them both in the midſt of the channell, it is there clean and clear, but ſomewhat uneven of ground, to wit, eight, ten, twelve and fourteen fathom, but you need not feare. If you will anchor under it for northeaſt or eaſt winds, then anchor betwixt the land and the Iſland, ſo that the a foreſaid bare gray northweſt poynt ſtand north, and the ſouthermoſt eaſt from you, in nine or ten fathom. Or if you will anchor for a ſouth, ſouthweſt, or weſt winde, then run further in about by that a foreſaid bare gray point, bring it ſouthſouthweſt from you, and anchor there in ſeven, eight, nine or ten fathom, there it is cleane ground of ſmall white & black ſand. A little to the northwards of the Iſland is a great

Eaſtergore.

Bay

Bay on Gotland, there you may alſo anchor in ſeven and eight fathom, for weſterly windes.

If you will ſayl in or out, to the northwards of Eaſtergore then come not very near the Iſland, becauſe there lieth of a riffe from the eaſt point farre into the ſea, which is a great half league without the land, not deeper then two fathom and a half, ſtony and very uneven, and is to be thought, that nearer to the land it is ſhoaler and fouler. From the ſoutheaſt ſide runneth off alſo a flat, a good wayes to Seawards, at ſome places not deeper then three, four and five fathom, and alſo very uneven, where of you muſt take heed.

Foure leagues north and by eaſt from Eaſtergore lyeth a haven, called Sliet or Sliet haven, lying in north and north and by weſt, behind ſome little Iſlands, there it is good lying for eaſterly, weſterly, & n. winds. Upon one of the northermoſt little Iſlands ſtandeth a ruinous church. You muſt come in there alongſt by the ſhoare from the ſouthwards. *From* thence to Faroſound the coaſt lyeth north and by weſt two leagues.

Faroſound you may run into, in two & three fathom water, there ſtandeth a Church with a flatte ſteeple upon the land. From Faroſound lyeth of a foule dangerous riffe, a league and halfe, or 2 leagues into ſea, called Salfonteyn, you muſt take very good heed there of, when you will run about to the northwards of Gotland.

From *F*aroſound to Gotſcheſand, the courſe is northnortheaſt, about 7 leagues.

Of the Depths and groundes abouts theſe Coaſtes.

Betwixt the ſouth ends of Oelands and Gotland in the fareway, it is uneven for to ſound, ſometimes men have two and twentie, three and twentie, & ſometimes againe eight and twentie, nine and twentie, & thirtie fathom, all black mingled ground, ſometimes ſtones ſo great as peaſe, of coleur like black earth.

When Howbrough is northnortheaſt 7 leagues from you, there it is fifteen fathom deep, ſtonie grounde, from thence on northeaſt 2 leagues, there it is twenty fathom deep, foule ſtonie ground. Neare about the places, ſo for from land that you cannot ſee Gotland, are bancks, where it is not deeper then twelve fathom. The like uneven groundsare alſo thwart of the ſouthend of Oeland, as hath beene ſaid in the former, but betwixt them both is deeper water. If you come in the farewaye from Rye to Brontholm betwixt the ſouth endes of Gotland and Oeland, and muſt lye by with contrarie windes, when you are in ten or twelve fathom, and then ſayle towards Oeland, you ſhall get deeper water.

If you lye by betwixt Oeland and Reef-coll, and that Reef-coll come to bee ſouthſoutheaſt and ſouth and by eaſt from you, ſo fare without the land, that you cannot ſee it, then you ſhall get alſo the like uneven ground of tenne and twelve fathom, redde groſſe ſtonie ſand, & alſo blackiſh groſſe ſandie ſtone ground. If you bee neareſt to Oeland, you ſhall get, in tenne or twelve fathom pittes in the tallowe, ſo that is ſeemeth, that theſe grounds of Oeland doe run over unto, or neare Reefcoll. The like grounds and unevenеſſe doe ſeeme to lye over the ſea alſo from the ſouth end of Gotland towardes Roſehead: for when the ſouth end of Gotland commeth to be about north from you, although it be fourteene or ſixteene leagues from you, you ſhall finde depth of ſiteen & twentie fathom ſoft grounde, like as off from Oeland: but if Gotland be more eaſterly or weſterly from you, you ſhall have deeper water.

When you are about a league by weſt the ſouthweſt poynt of Gotland, ſo that it be ſoutheaſt, or eaſtſoutheaſt from you about a league, then the Karels lye about north from you, which you may even ſee in cleare weather, there aboutes it is ſhoale water a good wayes off from the ſhoare. When the weſt poyns or ſteepe poynt is about north from you a little to the eaſtwards or to the weſtwards of it, there is tenne, twelve, fourteene, ſixteene, and eighteene fathom deepe, a great wayes from the land: but when that poynt commeth to be northeaſt, eaſtnortheaſt, or eaſt from you, there it is above fortie fathom deep.

Betwixt the ſouthweſt poynt of Gotland, & the north poynt of Oelandt it is alſo verie deepe, ſo that there you cannot caſt ground with fortie fathom.

When you are northweſt and northweſt and by north about two leagues from Houbrough, there you have great red ſtone ſand, & black ſtonis in it, ſo great as beanes.

Betwixt Gotland and the Sweeds ſchares in the fareweye it is four and thirtie, and ſixe and thirtie and eight and thirtie fathom deepe, and cloſe by Gotland five and twentie fathom.

When the tower of Houbrough is weſtnorthweſt from you, ſo farre as you may ſee it from the poope, there it is thirtie and one and thirtie fathom deepe, but being northnorthweſt from you it is ſhoaler, five and twentie and ſixe and twentie fathom.

Betwixt Howbrough and Eaſtergore lyeth a banck of four and twentie fathom, groſſe red ſand, ſo farre without the land, that you cannot ſee the land out of the top. To the eaſtwards of it lyeth another banck of fourteen fathom gray and white ſand, when you are over it, you ſhall have no gound in fortie fathom.

Two leagues without the land, by weſt Eaſtergore, there it is about one & thirty fathom ſoft ground.

He that ſayleth from Brontholm alongſt by Oeland towards Eaſtergore, let him not ſpare his lead, but ſound often for theſe foreſayd bancks and groundes; thereby you may well make ſome reckoning.

If you ſhould make reckoning to come by night with Gotland on the ſoutheaſt ſide, and have no good ſight, then come no nearer the land (about the north end or ſouth end, alſo by Eaſtergore) then in twentie or four and twenty fathom, & ſo you can take no hurt by night. By day you may come neare enough to it at many places, in ſeven, eight or tenne fathom.

How theſe lands doe lye one from the other, and from other lands.

From Houbrough to Eaſtergore northeaſt 12 or 13 leag.
From Eaſtergore to *F*aro-ſound north & by eaſt 7 leag.
*From F*aro-ſound to Gotſche ſand northnortheaſt and north and by eaſt 6 leagues.
From Houbrough to the Karels northnorthweſt 7 leag.
From the Karels to Wiſbuy northeaſt 7 leagues.
From the Karels to Gotſche ſand northe. 21 or 22 leag.
From Houbrough to the north end of Oeland northweſt, 14 leagues.
From the Karels to the Sweedes Jonckvrouw weſt and by north 13 leagues.
From the Karels to the channell of Stockholme north, a little more weſterly 23 leagues.
From the Karels to Boeckſchaer northeaſt northerly 46 leagues.
From Gotſche ſand to Boeckſchaer northeaſt, and by north, a little more northerly 20 or 21 leagues.
From Gotſche ſand to the ſouth poynt of the Alands haff north and by eaſt 33 or 34 leagues.
From Gotſche ſand to Wttoy northeaſt and by eaſt 36 leagues.
From Gotſche ſand to Dagerorte eaſtnortheaſt 26 leag.
From Gotſche ſand to Derwinda ſoutheaſt, 31 or 32 leagues.
From Eaſtergore to Dagerorte northeaſt, and by eaſt, 39 leagues.
From Eaſtergore to Derwinda eaſt and by ſouth 29 leagues.
From Eaſtergore to Quinsbrough deepe ſouth & by eaſt, 52 leagues.
From Eaſtergore to Roſe-head ſouth and by weſt 45 leagues.

From

From Houbrough to Hondſorte eaſtnortheaſt 11 d north eaſt and by eaſt, 50 leagues.
From Houbrough to Lyſerorte eaſt and by north, ſomewhat eaſterly 40 leagues.
From Houbrough to Derwinda eaſt ſomewhat northerly 37 leagues.
From Houbrough to Dermemell ſoutheaſt 37 leagues.
From Houbrough to Quinſbrough deep ſouthſoutheaſt 48 leagues.
From Houbrough to Roſehead ſouth 35 leagues.
From the north end of Gotland to Derwinde eaſtſouth-eaſt ſomewhat ſoutherly 28 or 29 leagues.
From Scheggens to the Sweedes Jouſer northeaſt. 7 leagues.
From the Swedens Jouſer to Ideſound the channell off Weſterwyke, or Silbuy, north and by weſt ſomewhat weſterly 7 leagues.
From the Swedes Jouſer to Northeroorden, the north end of Oeland eaſt and by north 3 or 4 leagues.
From Northeroorden to the channell of Weſterwyke north weſt 8 leagues.
From Northeroorden to the Barſound, north and by weſt 15 leagues.
From Northeroorden to the Hevering, or the channell off Nycopping north 18 or 19 leagues.
From Northeroorden to Hartſoe north and by eaſt, 20 or 21 leagues.
From Northeroorden to Landſoort northnortheaſt a little more northerly 21 or 22 leagues.
From Hevering to Landſoort eaſt and by north 6 or 7 leagues.

How theſe Lands doe ſhew themſelves at Sea.



Thus ſheweth the weſt point, or northweſt point of Gotland, when you come from the ſouthwards.



When Gotſchen ſand is northeaſt from you two leagues it ſheweth thus.



In this forme ſheweth the land a little to the weſtwards of Eaſtergore, when that point is a great league weſt from you, there it is four and twentie and five and twinty fathom deep, ſoft ground.



Eaſtergore being a league weſt from you, ſheweth thus, there it is five and twentie fathom deepe.

F I N I S.



The second part of the New SHINING SEA COLUMNE, OR SEA MIRROUR.

THE FIRST BOOKE Of the WESTERNE NAVIGATION

Containing

The description of the Sea-Coasts of Holland, Zealand, and Flanders, from Tessell to the Heads of Dover and Calice.

The first demonstration.

Where in

Are delineated the Tessel-streame, and the Channell of the same.

WHEN you sayle from Amsterdam to the Fall of Urck, you must keep the middle of the channell, in sailing to Tyoort, & from thence over Pampus, with a shipp of great draught, that draweth tenne foot or more, keepe Marken church without to the land of Udam, called Schyteldoecks-haven, soo long untill that the steeple of Zuyderwouw come past Kinnigherbuert, which are the houses half way betwixt Schyteldoecks-haven & Durgerdam, goe then towards the land east, untill that the New church of Amsterdam come about Durgerdam, keepe that soo standing, untill that the church of Weesp be come past the House or Castle at Muyen, so that it do stand somwhat nearer to Muyen, then to the House, keepe Weesp standing soo, untill that Edam come without the east end of Marken. In this fare waie it is a foote deeper, then if you sailed right through.

For to avoyde Muyen sand: men were wont to bring the houses which were wont to stand upon Tyoort to the southwards of the Heyliger-stee at Amsterdam, thereby you may make some reckoning, they are good longst markes: when Monnickedam is about the west end of Schyteldoecks-haven, and the house at Muyen betwixt Weesp and the church at Muyen, then are you thwart of Muyen sand. For to saile right through over Pampus, then keepe the steeple of Diemen over or about the point of Tyoort, so long as you can see Tyoort, that is a right longst marke for to saile over Pampus.

When you are come thwart of the east end of Marken, goe then on northeast, or somewhat more eastwardly towards the Fall of Urck, which is seven leagues: when you are come with in a great league of Urck, you shall meete with a hard sand, called the Houtribbe, lying southeast and northwest thwart over the Fare waie, there is no more water upon it, then upon the Flat of Wieringen, or of Freesland, you shall finde also no deeper water there then eight through. When Enckhuysen lyeth northwest and northwest and by west from you, then you are upon the Hout-ribbe. Before that you come against the sand, you can by night see the fire upon Urck. When that Urck or the fire is more northerly then northeast from you, and that you get shoaling, then that is certainly of the Hout-ribbe: for so you cannot come too neare the Enckhuysen sand. When you come from the southwards, you are not about the Enckhuysen sand before that the church upon Urck come without the little village of houses, which is then east and by south, and east southeast from you: if that then you goe affay n. w. and by w. or w. n. w. you shall runne close alongst by the side of the sand. With a ship of great draught, bring the church a good way through the houses, untill that it stand e. s. e. from you, then goe bouldly on n.w. & by w. or keepe Medenblick without the point of the Ven, and so you shall not come too near neither to sand nor shoale. Likewise if you come from the northwards, and bring Urck not more eastwardly then e.s.e. from you, then you cannot take hurt also of the Enckhuysen sand. From Urck to the buyes upon the Cripple and Hofstede, the course is n. w. and by w. with that course you may runne all alongst unto the souther buye upon Wieringen Flat: in turning to windwards, you may well bring Medenblick a little within the point of the Ven, but when as Medenblick is without it, then you are in the right fare way. Marks of Enckhuysen sand.

Betwixt Urck and the buye upon the Hofstede northeast somewhat eastwardly from the steeple of Enckhuysen lyeth a little plate of hard sand, lying towards the end of Enckhuysen sand, which is not deeper then the Frees Flat, about to the eastwards of it, is the deepest water, but about to the westwards of it (by some called the Katte-gat) you shall be sooner about the High horne, or the Enckhuysen sand, and it is good for ships that draw but little water.

The twhart markes of the buyes, both upon the Cripple and Hofstede; are Grootebroeck & Hem (two sharp steeples) right one in the other, and Warnis, a little sharp steeple in Freesland to the south side of the Cliffe of Staverne, then you have the length of these buyes, which lye each of them in three fathom, the one on the east shoare, and the other on the west shoare upon the tayle of the Cripple. There is the right fare waie, two foot lesse then five fathom, & soft ground. When the steeple of Medenblick commeth to the northwards of the house of Medenblick, so farr as the house is broade, then you are cleare of Cripple sand, and past it; goe then on northwest, and northwest and by north to the buye upon the Creyl, according as the winde and tyde shall be, the right farewaie there, is deep five fathom scarce. Thwart of the Creyl, in sailing out, or about the Creyl, in sailing in, that is a little within the Creyl on the north shoar, lyeth alongst the reach (towards the buye upon the Hofstede, a hard sand or plate, called the Marks of the buyes upon the hof-stede & Cripple. The Creyl.

South-Creyl. ſouth Creyl, upon which there is no more then twelve foot water, at low water, betwixt that banck and the north ſhoare, it is three fathom deepe, and ſoft ground, and to the ſouthwards, or the weſtwards of it, foure fathom and an halfe. When Mirnes, a little flat ſteeple in Freeſland, cometh over a long countriehouſe to the ſouthwards of the cliffe of Staverne, then you come right thwart of that foreſaid plate.

Mark of the Creyl. The markes of the buye upon the Creyl, are the ſharpe ſteeple of Twiſch over the Cornemill to the weſtwards of Medenblick, & that little flat ſteeple of Mirnes to the ſouth ſide or eaſt ſide of the cliffe. The right fareway there is four fathom & an half, & five fathom deep, ſoft ground, the buye lyeth in four fathom, if need require, men may runne wel a cables length about to the eaſtwards of it.

Markes of the beakon upon Cripple-ſand. From the Buye upon the Crippell, which lyeth upon the eaſt end off the Cripple-ſand, three fathom unto the Beakon upon Cripple-ſand, the courſe is northweſt and by weſt, and northweſt. When Lutkebrooke, a ſmall ſpire ſteeple commeth to Hem (which is alſo a ſpire ſteeple) then are you thwart of that beakon. From the Beakon upon the Cripple, unto the ſouther buye upon Wieringher flat, the courſe is northweſt and by weſt, or weſtnorthweſt, according as the wind and tyde ſhall ſerve, it lyeth at high water with an ordinary tyde in thirteene foot and a halfe, the markes there of are theſe: Grootebrooke commeth betwixt two Hay-ſtacks to the eaſtwards of the five water-mils, which ſtand to the eaſtwards of Warvers hoof, that is a long marke in the ſ. Twiſch a ſharpe ſteeple to the weſtward of Medenblick, commeth over Almerdorp, there was wont to bee a little flat ſteeple, but it is fallen downe, and therefore now not ſoo well to bee knowne, that was a right thwart marke. Upon Wieringen ſtandeth a cape, bring Eaſt-lander ſteeple, which is a flat ſteeple upon Wieringhen, right over the cape, and ſayle ſo right with it, and you ſhal come right with the buy. When you are at the buy, Weſtlander Church commeth then over Cleverſtee, and the eight mils to the eaſtwards of Medenblick, a little without the Towne. For to finde the deepeſt of the flat comming from the Cripple, you muſt bee carefull to looke out for the foreſayd markes. If that Twiſch come firſt to Almerdorp, before Cleverſtee come to Weſtlander Church, then you are to neare to Breeſand, or the grounds on the ſtarboard ſide, theſe are ſure markes for to ſayle over the flats, when there lye no buyes. Alongſt to the eaſtwards of the buye is the deepeſt water. If you will anchor before the Wieringer flat, then come no nearer the flat, then when Twiſch commeth a little to the Northwards of Opperdoes, or halfe way betwixt Opperdoes and Almerdorp.

Markes of the ſouther-buy upon the Flat.

For to ſail over the Gammels to Medenblick. For to ſayle from the foreſayd ſouther buy over the Gammels to Medenblick, you muſt bring the weſtermoſt water-mill of the eight (which ſtand to the eaſtwards of Medenblick) a capſtone barres length without or to the eaſtwards of the Bulwarke of the Towne, and ſayle then boldly without feare right in with them, untill that you come into the road where the ſhips commonly lye, or elſe, if you deſire to goe into the Haven, then ſayle in right to the northerhead, there is nothing that can hurt you, but if you muſt turne to windwards over the Gammels, and that your ſhip draweth more then eleven foot water, then runne not further over to the weſtwards, then that the foreſayd Water-mill commeth almoſt within, or a handſpikes length to the foreſayd Bulwark, ſoo that yet you may well ſee through betwixt them, then caſt about, & run over to the eaſtwards, ſoo long untill Grootebrooke come in the five water-milles, which ſtand to the eaſtwards of Warmerſhoof, or on to the eaſtwards of them, ſo you ſhall not doe amiſſe, for it is there broad and wide.

If you deſire to ſayle over the Gammels to Medenblick, when you come from the Flye, then bring the ſteeple of Opperdoes over the weſtermoſt Water-mill of five, which ſtand to the weſtwards of Medenblick, and runne in ſoo right with them, untill that the weſtermoſt water-mill off eight (to the eaſtwards of Medenblick) come to ſtand a capſtone barres length without the Bulwark, as here before once already hath been ſayd. Having theſe marks thus, and that it doe become darke, then goe on ſouth & ſouth and by eaſt, according as the wind and tide ſhal ſerve, and you ſhall not doe amaſſe, neither ſhall you miſſe the Town. In this foreſayd faire way, there is no leſſe depth then upon the Wieringher flat, and all ſoft ground.

When the ſteeple of Twiſch is over the weſtermoſt watermill except one of the five which ſtand to the weſtwards of Medenblick, and Grootebroeck, in the little village, to the e. wards of the five water-mils on the Eaſterdyke; then are you in 13 foot from the northweſt poynt of the Cripple, and paſt the taile of the Cripple. Upon theſe foreſayd markes, & 13 foot, lyeth a buye with three legges, & on the foreſayd weſt ſhoare lye three drift-beakons in 12 foot, and then commeth the weſtermoſt water-mill (of the eight which ſtand to the eaſtwards of Medenblick) and ſo you ſhall not have leſſe water then upon the Wieringer flat.

For to ſail over the Wieringen flat. From the Souther-buye to the ſecond or middle buye, the courſe is northweſt and northweſt and by north: but for to find the deepeſt water, goe firſt northweſt ſo long untill that Ypels-hoofs Church come over the water-mill, which is called the Bolmill, and then forth n. w. and by n. When the Cornmill upon Wieringen commeth in the ſwamp off the Oever, then you have the length of the ſecond Buye, which lyeth upon the weſt, or the ſouth end of a little plate, called the Repell, the faire way is alongſt to the weſtwards of it, there being at low water two fathom large, and at high water ſcarce three fathom deep. On the weſt ſide of the fayre way, betwixt the ſouther-buye, and the middle-buye, neareſt the middle-buy, lyeth a hard ſand called the Sow, or the old Sow, which on the eaſt ſide is very ſteepe and needle to which (in ſayling up) men might ſayle within a poynt or tayle of it: to the weſtwarbs of it ſhooteth off another tayle to the northwards, a great wayes towards the Northeaſt buye. Upon the outermoſt, or northermoſt poynt, called Seughoort, ſtandeth alwayes a beakon. Upon Wieringer upon the Oever ſtand two little capes with barrels on them, the one upon the North-end off the Oever, and the other upon the head, they are ſo little, that you can hardly ſee them: when you come off from the ſouther-buye towards the middle-buye, then keepe them not one in the other, for if you keepe them one in the other, then you will bee very cloſe by the ſouth ſhoare, and ſhall but even run cleare of the old Sow, but keep the ſouthermoſt a little to the weſtwards of the northermoſt, and then you ſhall run alongſt the right fareway, and ſhall not take any hurt of the old Sow. When you come neare the middlebuy, you muſt leave theſe marks and uſe them then no longer.

From the middle buye unto the Norther-buye, the courſe is northnorthweſt, when you come thwart off the norther-buye, then commeth Ooſtlander Church and the Cornmill both over a little Chappel covered with red tiles, that ſtand upon the Oever, thwart off it alſo ſtandeth the foreſayd beakon upon Seughoort. By the Northerbuye it is ſcarce three fathom deepe at high water, the fareway is alongſt to the weſtwards off it. When you come by the norther-buye, keepe ſtill the foreſayd northnorthweſt courſe, untill that Ooſtlander Church come to the northwards of the Sedge-dyke of the Oever, and then you are paſt the little plate which lyeth by the Northerbuye.

When as that Ooſtlander Church commeth from the Sedge-dyke, goe then north, and n. and by e. on, to the Neſſe. In that Fareway it is broad and wide the weſt ſhoare all alongſt unto the Neſſe, is very flat, there you cannot take any hurt, but may boldly runne alongſt by it,

For to fail over the Wie ringen flat.

De TEXEL Stroom met de gaten vant Marsdiep.

Medenblick

Enckhuysen

Wierin gen

TEXEL

Huys t'huysen

De Kille

De Dryssel

De Zuyder ton vant 't Wieringer vlack

Baken op de Krenpel

Repel

Groote kaap

Oosterend

De Burgh

De Slenck

Wittetom

Breesandt

Noorderton

Millelone

Koog

Hoven

Dutsche mylen 15 in een graet

Caarte van DE MASE, Ende het Goereesche gat.

Rotterdam
Carolus
Delfshaven
Overschie
Schiedam
De Kethel
Vlaerdingen
Delft
Lier
Naeldwyck
Monster
S. Gravesande
Maasland
Maaslandsluys
Nieuwe-Sluys
Swartewaal
Hellevoet Sluys
Nieuwen-Hoorn
Den Briel
Hellevoet
Quack
Oostvoorn
Recange
Wint-gat
Ambroeck al. Abbenbroeck
Haemvliet
Speckmisse
Suellandt
Middelburgsche
Sommerdyck
Dirckzland
Meloe
Den Hals
De Stelle
Goeree
Outdorp
Nolle
't Lant van Goeree.

't Lant van Putten.

T' LANDT VAN VOOREN

West Vooren.

Duytsche mylen 15 in een graet
Fr. en Eng. 20 mylen in een graet

Cust van Hollant tusschen de Maes ende Texel.

H O L

Egmont

Beverwyck

Egmont op Z.

Egmont op Zee

Camperduyne

Petten

't Oghe

De Helder

Groote Kaap

Texel

Hoorn

Westcapel

Wielingen

Kaap

Spenjaerts gat

Keijsers plaet

De Slenck

De Bree

Veerthien

Duytsche mylen 15 in een graedt
Spaensche mylen 17½ in een graedt
Eng: en Fran: mylen 20 in een graedt

Haerlem
Delft
S. Gravenhaag
Lier
Naeldwyck
Loosduynen
Monster
S. Gravesant
der Hey
Rijn
Maes
Scheveling
Noortwyck op zee
Catwyck op zee
Sandvoort
L A N D T.

by it, alt hough it were a lee ſhoare, but the eaſt ſhoare is ſteepe, eſpecially ſomewhat farther out towards Iaep-vaer, when the great Cape from Wieringhen ſtandeth a great ſhippes length to the eaſtwarde off the houſes upon the Oever, then you are well to waye, and right in the Farewaye, betwixt the norther-buye and the
The Neſſe. Neſſe. When Ypelshoof and Stru are one in the other, there is the roade, where men doe lade and unlade, you may anchor there-abouts in the middeſt of the fareway in foure fathom, the nearer the eaſt ſhoare the deeper. Iaep-vaer is a tayle of ſand or plate faſt to the ſhoare, which you might ſayle within where you ſayle off, but ſpecially in ſayling apwards in 6 or 7 fathom, uponit lyeth a blacke bay. Upon the poynt of the Neſſe over againſt Iaep-vaer lyeth a white buye, theſe lye both in
Iaep-vaer. three fathom or three fathom and a halfe. In the winter, when the buyes are taken away, then in place of the white buy there is ſet a beakon upon the Neſſe. From the Neſſe to Vogelſand, the courſe is moſt northweſt, therefore when you have gotten the length of the buye or the beakon upon the Neſſe, goe then more weſterly, northnorthweſt, and northweſt, and by north and northweſt, unto the Beakon upon Vogelſand; the weſt ſhoare you may ſound in ſix and ſeven fathom. The markes of this reach are theſe, the Mill of Ooſter-end: (which is a little village upon the eaſt end of Texel) and the Cape which ſtandeth upon the dycke; one in the
Voghel-ſand. other, then are you amiddeſt the Channel in the deepe, that is, tenne, eleven, and twelve, fathom: when the mill ſtandeth ſomewhat to the ſouthwards, or to the weſtwards of the Cape, then are you, byſouth ſhoare, which is very ſteep, which (in turning to windwards) you may not come nearer then in eight or nine fathom but being paſt Vogel-ſand, it groweth ſhoaler, and the eaſt ſhoare very ſteep. As ſoone as you finde that it beginneth to ſhoale, you muſt eaſt about, elſe you ſhould preſently be on againſt the eaſt ſhoare.

From the beacon upon Vogell-ſand, the courſe is weſt northweſt unto the buye upon Burg-ſand, which
Burg-ſand. lyeth upon the tayle of the Share, the markes of it are: the Eyerland even unto the eaſt poynt of the Iland Teſſell, and the Church of the Horne upon Teſſell too Zuyd-haffell, which is a few houſes to the northwards of the Schonce. Or elſe when you come about Vogelſand, then keep the foreſaid cape and mill one in the other, untill that the foreſaid Horn come to, or through Zuyd-haffell, & then run on, keeping them ſoo: When that Eyerland commeth even to the eaſt poynt of Teſſel, then you have the length of the buy upon the Burgſand, you may bring the Horne well ſomewhat to the northwards of Zuyd-haffell, but in no wiſe to the ſouth-
Cope-vaerders-Roade. wards of it, for elſe you ſhould ſayle on againſt the ſouth ſhoare. For to ſayle from thence to Copevaerders roade, you muſt keepe the Horne to Zuyd-haffell, and ſayle forth keeping them ſo, untill you come againſt Teſſell in the roade, and anchor there where you thinke good. Before Ooſter-end it is beſt for ſmall ſhips, there it is ſhoald water, and there goeth little tide, but moſt ſhips doe anchor before the Geeſt.

Upon the poynt of the Boſſe lyeth a white buy in The Boſſe. three fathom on the weſt point of the Balgh, which you muſt leave on the ſtarboard ſide, and run about to the eaſtwards of it into the Balgh; & then forth alongſt by the beacons to Wieringhen, you muſt leave all the beacons alſoo on the ſtarboard ſide.

For to ſayl up from the Helder towards the Wieringeflat, you muſt goe northeaſt, or ſome what more eaſterly, according as the wind and tyde ſhall be, or elſe in eight or nine fathom alongſt by the Teſſell, untill that the Hoorn come to the northwards of Zuydhaffel, but take heed of the Wieringhen ſide, which is ſo ſteepe there, that you may have twelve or thirteene fathom at one caſt, and ſhould be a ground before you ſhould be able to heave the lead againe.

When that the Hoorne commeth then to Northwards of Zuyd-haffell, then keep them ſo ſtandig, and ſayle up ſo to the Vogel-ſand, when that the Eyerland commeth even without the eaſt poynt of Teſſell, then you have the length of the buy upon Burghſand, which lyeth on the ſouth ſhoare, upon a tayle of ſand, which men may ſayle within at five or ſixe fathom. From that Buy upon Burghſand, it is e.ſ.e. to the Beakon upon Vogel-ſand, but ſayle upon the foreſayd markes of the Hoorn and Zuyd-haffell ſoo long untill that you have the Cape upon Teſſell, and the mill of Ooſter-end one in the other, then keep the one in the other leaving the firſt markes, and ſayl up ſo unto the buy or Beakon upon the Neſſe, and ſo you ſhall run amidſt the channel in the fareway which is 10. 11. and 12 fathom deep. If you bring the mill a title to the Weſtwards of the Cape then you ſhall be cloſe by the ſouth ſhoare, which is ſo ſteepe, that you may not come neare it, in turning to windwards, then in eight or nine fathom. Being come about the Neſſe, then go on ſouth & ſouth & by weſt, towards the buy upon the flat.

Of the tydes & courſes of the Streams about theſe foreſayd places.

Upon the Wieringer-flat maketh full ſea a ſoutheaſt or northweſt moon. Before Texel, in Coopvaerders road eaſt ſoutheaſt, & Weſt northweſt moone.

Heights.

The Marſdiep lieth in three and fifty degrees, ſayle out of the north ſea, (being in that heyght) eaſt on, and you ſhall fall right with it.

The ſecond Demonſtration.

Wherein

The Coaſt of Holland from Texel to the Maes, as alſo the Channels of Texel, the Maes and Goeree at large.

TEſſell is a long plaine Iland, whereupon ſtand 4. Churches, the weſtermoſt hath a high ſharpe ſteeple, and is called weſt-end, or S. Johns, but by the Pilots it is called the Weſten, or the Wambus. To the ſouthwards of that ſtandeth an other ſharp ſteeple, called the Hoorn. The third is called the Burgh, which ſtandeth ſomewhat more to the northwards then the other two beforeſayd. The fourth is called the Oogh, or the Koogh, which is the northermoſt of them all, without ſteeple, and is covered with
Eyer-land. blew ſlates.

The Eyerland lyeth cloſe to the eaſt wards, or to the n. ward of the Teſſel, and faſt to it, when it floweth ſomewhat high, it is divided of from the Teſſel by the ſea, & made to an Iland: it ſheweth it ſelfe of at ſea like a Low Plaine litle Iland with litle hommocks, there ſtandeth upon it no more then 2 litle houſes.

Huyſdown is a ſhort poynt of land with ſome white Huyſ-
ſandhills, where of the greateſt and higheſt is called the down. Kyckdowne, or Kykers-downe, the next the ſouthwards of it, is called Dirckooms ſand-hill, further to the ſouthwards they run flat of by little and little, and at length to nothing in a flat plaine ſtrand. Upon the eaſt end, called the Helder, lye alſo ſome ſandy hills, betwixt

the Helder and the Kyckdown, it is a moſt flat ſtrand, with ſome ſandy hils like a dike, upon which (about halfe way betwixt both) ſtandeth the litle or the outer moſt Cape, the great cape ſtandeth ſomewhat within the land, about eaſt from the Kyckdown.

Huyſdowne, or the Marſdeep and the Maes lie ſouth ſ. w. ſomewhat ſoutherly, and north-northeaſt ſomwhat northerly about 24 leagues aſunder. From Huyſdown to Petten the coaſt lieth ſouth and by weſt foure leagues.

Petten. Petten hath a little Church with a little ſteeple, & thereabouts you ſhall ſee two other little ſharpe ſteeples in the Northland. A little to the ſouthwards of Petten lieth the Hondboſch, a league to the ſouthwards of Petten lieth Camperdowne the beſt land to be known thereabouts, the north end is a high ſteep white ſand-hill, which goeth ſloping downe: the ſouthermoſt part is gray and rough, being grown over with head, or ſpyrie graſſe, to the ſouthwards of it lie many rough hommockes or ſand hils, where ſometimes you ſhall ſee amongſt them a white ſpot, ſo that it is very good to be known. From Petten to Egmont upon the ſea, it is three leagues. Eg-

Egmont upon the Sea. mont upon the ſea is alſo very good to be known, for it hath a thick flat ſteeple, which ſtandeth like a ſayle in the ſand-hill, and a little to the ſouthwards of it you may ſee Egmont-within, which hath two high ſteeples upon the Abbey cloſe one to the other, whereof the one is ſharpe, and the other (to wit, the northermoſt) is flat, becauſe the ſpire is lately falne downe. A little to the northwards of the Abbey ſtandeth another ſteeple of the church upon the old walls, but it is not ſo high as that upon the Abbey: ſo that upon all the coaſt of Holland, there is no place ſo good to be known as this. From Eg-

Wyck upon the Sea. mont upon the ſea, to Wyck upon the ſea, are 3 leagues that is alſoo a flat ſteeple: when you are thwart of Wijck upon the ſea, you may ſee Beverwyck a little to the northwards of it, which is a high thick, and ſharp ſteeple; beſides that, you may ſee alſoo betwixt Egmont and Wyck upon the Sea Caſtricom, and more other ſharp ſteeples. From Wyck upon the ſea to Santfort, it is three leagues,

Sandfort. Sandfort hath a ſharp ſteeple, with a high fire-beakon, a little to the ſouthwards of it, in the black ſand-hill which ſheweth it ſelfe alſoo like a ſteeple.

To the northwards of Sandfort lieth a high white ſand-hil, alongſt over which you may ſee Haerlem, a high ſquare croſſe Church, which hath a high ſharp ſteeple upon the midſt of the Church, and alſoo to the northwards of it, a high ſmall ſteeple, called Baeckneſſer ſteeple) thwart of it hath the coaſt of Holland a great Bay. From Sand-

Noortwyck. fort to Northwyck upon the ſea, are 3 leagues, that is a flat ſteeple, whereby ſtandeth a fire-beakon. To the northwards of Northwyck upon the ſea, you may ſee Northwyck within, a flat ſteeple, whereupon ſtandeth a little cap not very high, and upon the midſt of the Church ſtandeth a little ſmall tower. From Northwyck

Catwyck. to Catwyck upon the ſea, it is a great league, being alſoo a flat ſteeple, which in times paſt hath had a ſpire: to the ſouthwards of it ſtandeth a high fire-beakon, ſeeming like a ſteeple: you may alſoo ſee thereabouts within the land (when you are not very farre from the ſhoare) Catwyck upon the Rhyne, and Reynſ-burgh, and Valcken-

Scheve-lingh. burgh, all ſharpe ſteeples. From Catwyck to Schevelingen are 3 leagues, the Quire of Scheveling Church is ſomewhat higher then the Church it ſelfe: in manner as

The Hague. the Hagues Church: a little to the ſouthwards of that Church ſtandeth alſoo a fire beakon. About halfe a league within the land, you may ſee the Church of the Hague, which is very good to be known, the Quire is higher then the body of the Church. The Hagues ſteeple you may ſee far above any other part of the land. From

The Heyde. Scheveling to the Heyde it is 2 leagues, and from thence forth to Graveſand, or to the north ſide of the Maſe, one league. The Heyde is a village without a ſteeple: but a little within the ſand-hill, ſtandeth a flat ſteeple

Monſter. Graveſand. called Monſter. Graveſand is a high ſharp ſteeple, very good to be known, which ſtandeth on the north ſide of the Maſe. The Brill is a great flat ſteeple on the ſouth ſide of the Maes. All this coaſt of Holland, from Huyſdown to the Maes, is altogether a clean ſtrand, which mē may come ſo neare to as they will, into 4 or 5 fathom. The Brill

For to ſayle from the Copevaerders road out at the Teſſel you muſt goe firſt ſouthweſt or ſomewhat weſterley to the Helder, or run alongſt by the Teſſell ſide in 9 or 10 fathom, untill you come neare the Helder, and then goe out weſt cloſe along by the ſhoare of the Helder, and by little & little ſomewhat more northerly, untill that the capes upon Huyſdown be one in the other, or that the greateſt come through the ſmalleſt, to wit, to the weſtwards of it, and then goe out n. n. w. or more northerly or weſterly, according as the wind or tyde ſhall be, untill you come againſt the north ſhoare, in 5 or 6 fathom, and run boldly out alongſt by it, untill you be cleare out at ſea. For to ſayl out at Teſſel.

When the tower of Weſter-end (which men do name the Weſtren, or the Wambus) commeth to be e.n. e. from you, or a little more eaſterly, then you have the length of Cape & ſteeples buy, that is, the innermoſt buy of the Spaniards channell, which you ſhall eſpie on the larboard ſide. To the northward of it lye three other buyes, all alongſt the eaſt ſide of the Keyſers-plate, neare upon one courſe, (to wit, n. n. w. or a little more northerly) which you muſt leave (in ſayling out) all on the larboard ſide. The outermoſt buy lieth from the fourth, north ſomewhat eaſterly upon the poynt of the Keyſers-plate, in 22 foot at low water, you may run alongſt to the weſtward: of it, but not far, for the Keyſers plate is on the eaſt ſide unto the outhermoſt end very ſteep, but the eaſt ſhoare of the deepe is flat, when you come thwart of the foreſayd outermoſt buy, then lieth the Kooger Church right, e. n. e. from you, and the Capes upon Huyſdown are one in the other.

For to finde the Spanniards Channell comming from the northwards, you muſt bring the Capes upon Huyſdown one in the other, or a little through one another, to wit, the runner that is the ſoutermoſt and greateſt, a little to the eaſtwards of the other, then they ſhall ſtand ſ. ſ. e. from you, ſayle then right in with them, keeping them ſo, and you ſhall ſayle right upon the outermoſt buy, or in ſight of it, which lieth (as is ſayd) upon the poynt of the Keyſers-plate in 22 foot at low water; when you come to the buy, the Kooger Church ſhall lye full eaſt north eaſt from you. Therefore if you come from the weſtwards or the ſouthwards then bring that Church not more northerly then eaſtnortheaſt, but rather a little more eaſterly from you, and ſayle then right in with it, untill that the Capes come one right againſt another, or elſe you ſhould lightly ſayle upon the Keyſers-plate, which is without upon the north-ſide very ſteepe. Men may runne a little weſtwards of the outermoſt buy, Alongſt to the eaſtwards of it is it broader. For to ſayl in at the Spaniards Channel.

From the firſt or the outermoſt buy, to the ſecond, the courſe is ſouth, ſomewhat weſterly, and from thence to the third, fourth, and fifth, which is the buy of the Cape and ſteeple, it is al moſt one courſe, ſouth ſouth eaſt, or ſomewhat ſoutherly, the buyes lye along the weſt ſhoare, men may for need ſayle alongſt to the weſtwards of them, but not farre, for the weſt ſhoare is ſo ſteepe, that if a great ſhippe ſhould lye with the ſtemme againſt it, there ſhould be at head no more then 3 foot, & by the main maſt at leaſt 3 fathom deepe, but the eaſt ſhoare is flat, men may runne alongſt by it upon their lead, untill they come within the buyes. The buy upon the tayle, that is the innermoſt buy of the old ſlenck, lieth from the buy upon Cape and ſteeple, ſouth & by weſt, & ſ. ſ. w. but the Helder ſoutheaſt, men may ſaile from the buy upon Cape and ſteeple, right with the Helder, without danger, or to the buy upon the tayle, & from thence alongſt by the ſouth ſhoare, which is alſo very ſteepe, or right to the Helder, according as ſhall be beſt convenient for the wind and tyde. The foreflood falles very ſtrong over the ſouth ground to the Spaniards channell, till half flood,

flood, and the fore-ebbe s. s. e. till halfe ebbe. The Helder lieth from the buy upon the tayle, e. s. e. and s. e. and by e. When you are come near the Helder, run cloſe by it, ſo to avoyd a tayle ſhooting off from Geeſt ſand, which you may ſayle within as you come from the ſea, there lieth a Buy upon it, which leave on the Larboard ſide. Being paſt the Helder, goe north-eaſt; or a little more eaſterly, or alongſt the Teſſels ſide in eight or nine fathom, unto the Copevaerders road. The Wieringhen ſide is ſteep.

The fa-ling of the tide.

In the Slenck uſed to lye ſix buyes, but the ſands are growne now ſoo high and have ſtopt the paſſage.

The Slenck.

Within the ſixth Buy it is wide enough to ſayle in from thence right to the Helder eaſt ſoutheaſt.

To ſayle out at the Land-deepe, run alongſt within a bow-ſhot of the foot ſtrand of Huyſdown, and about by the heads, and you ſhall not miſſe the innermoſt Buy, lying on the ſhoals, neareſt the weſt ſhoare in ſeventeen foot at high, and 13 foot at low water, that ſhoaly place is not above 2 ſhips lengths broad, over it, and alſoo within it, it is deep enough. Thwart of that Buy ſhooteth off a little tayle from the ſhoare towards the Buy, therefore run cloſe alongſt by the Buy, and leave it on your ſtarboard ſide in ſayling out. Beſides that Buy, there lie 3 other Buyes in the Land-deep, which you muſt leave all lying to ſeawards of you, and ſo run betwixt them and the ſhoare, when you are paſt the 4 Buy, you are paſt all the ſhoale, and may ſayle where you will.

The Land-deep.

To finde the Land-deep comming from the ſea ſouthwards, you muſt ſound the ſhoare in four fathom and a halfe, and running ſo by the ſhoare, you ſhall ſayle right with the outermoſt buy; which doue, come no neare the ſhoare els you ſhould ſaile within the taile of Arrian Bergers Creek, which ſhooteth off from the ſhoare, to the ſouth ſandhill. Or els if you come from ſea with an open winde, then keepe the great Cape upon Huyſdowne over Dirckooms ſandhil, (that is, a round ſandhil a litle to the ſouth of Kyckdowne but not ſoo high) and ſayle ſoo in right with it, you ſhall then meet with the outermoſt buy, which lieth at low Water in 4 fathom and a halfe neareſt the Weſter-grounds, or the hakes, leave it on the larboard ſide, and run in alongſt to the eaſtwards of it, betwixt it & the ſhoare, it lieth moſt northeaſt, and north-eaſt and by north in, you can take no hurt on either ſide, if you take heed to keep you from the ſhoare. Thwart of the Kyckdowne, or comming to the ſouthwards of it, you muſt edge a litle from the ſhoare, to avoyd a ſhoale which lieth neare ſomewhat off from the ſhoare. When you come to the ſecond buy, then commeth the mill to the Northwards of Kyckdowne, and at the third, the mill and Cane Nels howſe come one in the other; which two buyes lye in 5 fathom at low water. From the third to the innermoſt buy, it is n. e. and by e. run cloſe along to the eaſt ward of it, to avoyd the foreſayd little tayle of ſand, which (thwart of it) lieth off from the ſhoare, and then forth within a bow ſhot about the heads, and ſo along by the ſtrand of the Helder.

Concerning the Maſe, and Goerees Gat.

The Maſe is at preſent but a wide or broad flatt, having little change of depth, which may bee ſayled with all winds.

To ſayle in to the Maſe with a ſouth wind.

When the wind is ſouth, regard the old markes, that is (comming from ſea) before you ſee the Capes, bring the ſteeple of Brill which is a ſtumpy ſteeple e. ſ. e. ſouth from you, or a little e. or ſoutherly after you have gotten the cape, bring them together, and run on, or if you bring the Brill ſteeple a ſpades length northwards the tower of Ooſtvoorn, and run on, you ſhall then firſt run the buy in ſight lying in 3 fathom at low water.

From this firſt buy to the 2 and 3 buy, wee ſayle right upon the Capes. The ſeeond buy lyes on 13 and the third upon 11 foote, being there come, the ſteeple of Goeree comes a little upon the foote ſtrand of the land of the Brill; the fourth buy lyeth much alike with the third right upon the Capes, though a little more ſoutherly betweene theſe buyes the ſhalloweſt of the Maes is about ten foote, by the fourth buy it begins to deepen, with a common low water, it is about eleaven foote deepe, but with a ſoutherly or ſ. e. wind it runs ſhallower. From thence to the fourth buy it is broad, ſo that there wee may ſayle in a reaſonable depth. Below the Heydyck or in moſt beacon it is much narrower. The fifth buy lieth diſtant from the fourth e. n e. and n.e. and by e. From the fourth buy to the fifth ſouthward along the buyes in the right channell it is deep 14. 15. 16 & 17. foote, & neare the fifth buy five fathom. The ſixth buy lieth from the fifth e. and by N. in twelve foote, there alongſt the ſouthward it is 5 & 6 fathom deepe, and is called the Pitt. Comming then a little beyond the ſixth buy, ſoo commeth Maeſlant ſluce and Vlaerding ſteeple together, keepe them ſo and run forwards ſoo long till you bring the old head of the Briel in the new head, then you may run to the land of the Briel and ſo further alongſt the ſouthwall, till you come before the Briel where you may anchor. Now who will run higher up the Maſe, let them run all along the ſouthwall till hee is paſt the New ſluce, chuſe then the Northwall. From the eaſt end of Rooſenburgh there comes a tayle off; which you may underſayle comming weſtwards. If then (when you are paſt the heads of Swartewal) you bring not the Briel ſteeple without or northward theſe heads, but keepe to the ſouthward, you can not then underſayle it but muſt run farre about ſouthwards. Full eaſtward of Heenvliet runs the old Maes in; the flood falles there verry hard on, you muſt take heed that you bee not deceived with the Terweſand, that is a great flatt ſand, lying foremoſt in the midſt of the old Maſe, & that lyes a greate deale drye at low water, and ſtretcheth with a long ſmall point weſtwards into the Maes. To ſhun this, take notice of a buſh of trees, ſtanding on the ſouth-wall, a little eaſtward the old Maes, keepe the ſteeple of Rotterdam northward that buſh, ſoo ſhall you not ſayle over that Tarweſand but if you let the ſteeple come ſouthward the buſh, you ſhall ſurely ſtrike upon the foreſayd tayle. Northward of the Tarweſand is it deepe, upon which you may ſayle in the old Maes even to Dort, therein lye alſoo two buyes; hee who will run upon the foreſayd Markes of the Rotterdams ſteeple and the buſh of trees, ſoo long till the ſteeple of the Briell comes together with a tile houſe, which ſtands upon the ſouthſide of the eaſt end of Rooſenburgh, and keepe that ſoo ſtanding, ſoo ſhall hee not miſſe of the buy. Beeing paſt the old Maes wee ſayle in the midſt of the water beyond Vlaerding, till wee come to the five ſluces, from thence you muſt chuſe the ſouthwall, and run along neare unto it, till you come over a ſmall ſand or bancke, where with low water there is 11 or 11 and a halfe foote water, how nearer you keepe to the ſouthwall ſo much the deeper it is, ſtretching croſſe the Maes, aſſoone as you are paſt that, ſo keepe ſtraight to the Schiedams head, there have you the deepeſt water.

The olde Maſe.

Tarweſand.

Will you ſayle to Delfs-haven (beeing paſt Schiedam) keepe the ſide of the northwall, and run along thereby till you come before the haven and anchor there. But if you will goe for Rotterdam, run along the Northwall, ſo long till Ouwerſchie and the houſe of Spanjen, come together, ſtrike then over, or a little ſooner to the ſouthwall, and alongſt thereby, or bring the ſteeple of Vlaerding, when you are paſt the head of Schiedam over the third houſe upon the Schiedams head, keepe that ſo ſtanding, ſo long till the Mill and the head of Charlois (upon which ſtandeth a little buſh of trees) come together, you ſhall leave a litle dry plate lying halfe way betwene Schiedam & Delfs-haven on your larbord, & ſo run ſouthward of the dry platt under the haven. Upon this platt lyes no more then 7, and upon the bancke neare the haven 2 or 3 foote water, and are both verry ſteep. Now when the foreſayd Mill and Charlois head come together, ſo keepe them ſtanding till you come neare the new head of Rotterdam, ſayle then to the Citty, and there along cloſe in betweene the Citty & Platt, there may you caſt anchor.

Delfs-Haven.

How you ſayle the Maes in with a northerly winde.

But if you will ſayle the Maſe in with a Northerly winde you muſt keepe, the upperwall that ſoo you may have the ſmootheſt deepeſt water, for by the Northwall there goes in a depth where a full foote of water and more, is then by the buyes above written and is called Everſkil. To reach this, you muſt bring the outermoſt beacons in the Brill and keepe it ſo ſtanding, till wee bring two buſhes of trees on the North ſide eaſt of it, that is about a goteling ſhot northwards the uttermoſt Buy, bringing the moſt northerley buſh in with the Delfs ſteeple ſo are you then on the northſide of Everſchil, and the ſoutherly buſh to the Lier then are you on the ſouth ſide of Everſkill, then keepe ſoo long betweene both till you bring the ſteeple of the Brill betweene both the Beacons (then are you right over againſt the Hompel) then run againe to the land of the Brielpeither to the pit or the abovementioned Southergat.

The Goerees-gat.

Bewixt the land of the Brill and Goeree, goe in alſoo two channells, the northermoſt is called the Quacks-deep, and is not for great ſhips, but onely for ſmackes, and ſmall ſhippes: the other is the Goerees gat. Betwixt theſe two channells lyeth a great plate, called the Hinder, which at low water is not deeper then five, ſixe, and ſeven foot. To the northwards of it goeth in the Quacks-deepe, and to the ſouthwards of it the Goerees-gat.

Quacks-deep.

For to finde the Quacks-deepe comming in out of the weſt, you muſt keepe the ſteeple of the Brill eaſt from you, and run ſo in, untill that a great country houſe, (which you ſhall ſee ſtand alone a litle within the poynt of the Quacke) come to the ſouthermoſt ſand-hills of the land of the Brill, which ſhall then ſtand neare about ſouth eaſt from you, keep that then ſo ſtanding, and runne ſo right in, untill that Ooſt-voorn come to the weſtermoſt or ſouthermoſt ſand-hills, then runne in alongſt by the ſtrand ſomewhat more ſoutherly, untill that Goeree com to the eaſtwards or within the ſand-hills, and then you ſhall bee paſt the eaſt point of the Hinder, which the Pilots call the Buyen, runne then towards Goeree, or to the eaſtwards, to Hellevoet-ſluce, where you deſire to be.

Goerees-gat.

For to ſayle in at the Goerees-gat, you muſt bring the ſteeple of Goeree, and the Cape upon the land of Goeree, one in the othor, and then they ſhall ſtand eaſt and by ſouth, and eaſtſoutheaſt from you: or if you can not ſee the cape, then bring the ſteeples eaſt and by ſouth, or eaſtſoutheaſt from you, according as you ſhall have the winde, ſayle in right with it, untill you come hard aboord the ſtrand, and within a bawles caſt in a longſt by it, eaſt and by north, & eaſt in, ſo long until that the land doe fal away more to the ſouth-wards; thereabouts runneth of from the ſhoare a little tayle which men might ſayle within, in going out, but not in comming in, there you muſt edge a little further off from the ſhoare, being paſt that, luffe up againe towards the ſhoare, or haven of Goeree, & anchor there before it, or els if you will run up to Hellevoet-ſluce, then bring the mill which ſtandeth to the weſtwards of Goeree, a litle to the northwards of the ſteeple of Goeree, keepe then ſo ſtanding, & ſaile ſo up to Hellevoet-ſluce, & you ſhal not come neare the plate which lieth over againſt or to the ſouthwards of Hellevoet-ſluce.

When you ſaile in at the Goerees-gat with a bare ſoutherly winde, & that you can not bring the cape & ſteeple one in the other, you may bring the ſteeple well e. ſ. eaſt, or a great capſtane bars length to the northwards of the cape, & then run over untill you come againſt the ſtrand, and ſo you ſhall runne over the tayle of the Hinder in 14 & 15 foot at low water, but when the cape & ſteeple are one in the other, you ſhall not have leſſe then 19 or 20 foot. Being come over the tayle of the Hinder, in the right deepe, it is 6, 7, & 8 fathom deepe, the neerer the ſtrand the deeper water. A little within the cape, or almoſt thwart of it, is the narroweſt of the channell further in it is wider, on hen. ſide towards the Hinder, it is riſing ground, but the ſouth ſhoare a longſt by the ſtrand is very ſteepe.

Of the tydes & courſes of the ſtreams, about theſe foreſayd places.

UPon the Wieringer-flat maketh full ſea a ſoutheaſt or northweſt Moone.

Before Teſſel, in Coopvaerders road, an eaſtſouth-eaſt, & weſtnorthweſt Moone.

Without the grounds or ſhoals of the Teſſell, an eaſt & weſt Moone maketh the higheſt water, and in the entring of the Teſſel, an eaſt & by ſouth, & weſt and by north Moone: but the flood goeth a good while longer in. And likewiſe runneth the ebbe alſo longer out, then the loweſt water. When the Moon is ſouth, or ſomewhat more weſterly, it beginneth apparantly to flow without on the ſtrand, and likewiſe upon the ſhoals.

The fore-flood, and the after-ebbe out of the Teſſel, fall both one with the other n. n. e. thwart over the grounds and channels, and right out at the Spanjards channell, untill halfe flood: &c to the contrary, the fore-ebbe, with the after-flood fall right in at the Spanjards channell ſ. ſ. eaſt over the ſouth grounds, and thwart over the Slenk and the other channels, untill half ebbe. A little while before half flood, the flood beginneth to runne right in at the channel, and againe a litle before half ebb, the ebbe beginneth to ſet right out at the channel. Therefore hee that wil ſayle into the channels, muſt reckon his tydes very wel, wherein conſiſteth very much. Without before the channel in the ſea, the tyde turneth about with the Sunne, ſo that when a ſhippe doth lye at an anchor without the channels, & hath neither good nor hurt of the waves of the ſea, it ſhould have but a little ſtill water.

In the North Sea the tyde falleth round, more then halfe tyde, upon the Broad fourteene, it turneth about with the Sunne or the Moone, and falleth but a quarter tyde right alongſt the ſea. Nearer the coaſt of Holland & Zealand, the tyde falleth (whether it be flood or ebbe) ſomewhat ſloping towards the land, but in the midſt of the tyde, it falleth right alongſt the ſea, and in the laſt of the tyde, it ſetteth to ſeawards, towards the weſtwards or the northwards.

Betwixt the Marſdeepe and the Maes in the fareway, the fore-floot commeth out of the north ſea, and turneth about with the Moone, falling towards the land north-eaſt, & n. eaſt and by north.

The Fiſhermen of the Maes ſay, that when they are out of ſight of the land, they can perceive in calme weather by the turning about of the tide, they be to the northwards or to the ſouthwards of the Maes. Somwhat to the ſouthwards of the Maes, the after-flood turneth about againſt the Sunne, but to the northwards of the Maes, is turneth about with the Sunne, untill the laſt quarter, and then it ſetteth towards the ſhoare, or the coaſt next unto it. They ſay alſo, that alongſt the coaſt of Holland, men have no helpe of the ebbe in turning to windwards towards the Maes, except they bee without ſight of the land, becauſe there goe no ebbes by the land when the wind is to the ſouthwards of the weſt.

Before the Maes a ſ. w. and by weſt, and a n. e. and by eaſt Moone maketh a high water.

Before the Brill a ſ. w. and ſ. w. and by ſouth, & north-eaſt, & n. e. & by n. Moone.

Before the old Maes a ſ. w. and n. e. Moone.

Before Rotterdam a ſ. w. & by weſt. & n. e. & by e. Moone.

Before Dordrecht a weſtſouthweſt Moone.

In the Goerees-gat, and before Goeree, a ſ. w. & by ſouth, and ſ. ſ. w. Moone.

Before Hellevoet-ſluce a ſ. w. and by ſouth Moone.

Betwixt the Marſdeep and the Maes in the fareway, the foreflood commeth out of the north ſea, & turneth about by litle & litle n. e. & n. e. by north towards the land.

In the

In the ſea thwart of the places, (without ſight of land) is a poynt, or a poynt and a halfe later full ſea, the further from the land the later.

Not very long after that the flood beginneth to go without the Maes, it doth begin alſo to go into the Maes but the after-ſtood falleth ſtrong in, and ſoo likewiſe in the Goerees-gat. Cloſe before the channels by the land, the tyde turneth about with the Sunne, ſo that when the after-flood falleth into the channels, it turneth to the ſouthwards, and becommeth againſt a running ebbe: the after-ebbe falleth againe thwart off to ſeawards out of the channels.

Of the depths & grounds about theſe places.

Five or ſixe leagues without the Teſſell, lyeth the Broad fourteens, lying from thence n. eaſt with a ſmall tayle which lyeth about north from the Teſſell, and n.w. from the Flye, to the ſouthwards it runneth with the eaſt ſide againſt Catwyck or Scheveling, but the weſt ſide lyeth off at leaſt 11 or 12 leagues thwart off to ſeawards from Nortwyck and Catwyck, it is a banck moſt of fourteen fathom deep in ſome places ſomewhat more or leſſe. Betwixt it & the land it is againe 18 and 19. and to the northwardes 20 fathom deep. When you come over it about the Teſſel or the Flye, and come againe in 16 or 17 fathom towards the land, then you ſhall begin to ſee the land.

There runneth of to the ſouthwards into the ſea from the coaſt of Holland 3 ſmal Banckes or ribbes, which are ſomewhat broad & ſhoale by the land, & run off ſharp & deepe to the end, the firſt the fiſhermen call the Smaleight, & beginneth a litle to the ſouthwards of Egmont upon the ſea: the ſecond the Wtterrib thwart of Wyck upon the ſea: the third and ſouthermoſt the Hard, a litle to the northwards of Santfoort.

The high ſteeples of Holland and Weſt-Frieſland, as Egmont-within, Wyck upon the ſea, Santfoort and other more, men may ſee before they can ſee the ſand-hils five leagues without the land, in 14 or 15 fathom, that is, upon the ſouth end of the Broad-fourteenes, but Camperdownes, and the ſand-hills thwart of Haerlem, they may ſee before they can ſee ſome of the ſteeples. The ſteeples alongſt the coaſt are moſt of them flat, except the Beverwyck, Schevelingen and Santfoort.

Before the Maes and Goeree men may ſee the land in 14 and 15 fathom.

Courſes and Diſtances.

From Teſſel to the Maes, ſ. ſ. w. 24 leagues.
From Teſſel to the Heads, or the Strait between Callis and Dover, ſ. w. ſomewhat ſoutherly 52 leagues.
From Teſſel or Marſdiep to Callis cliffe ſouthweſt and by ſouth 52 leagues.
From Teſſel to the North foreland ſ. weſt ſomewhat weſtwardly. 47 leagues.
From Teſſel to Orfordneſſe w. ſ. w. 37 leagues.
From Teſſel to Yarmouth weſt, and weſt and by ſouth 34 leagues.
From Teſſel to the Shield, or Cromer weſt. 40 leagues.
From Teſſell or Marſdiep to Flambrough head weſt northweſt 60 leagues.
From the Marſdiep to Lieth in Scotland n. w. and by weſt ſomewhat northerly 104 leagues.
From the Marſdiep to Newcaſtle w. n. weſt ſomewhat northerly 83 leagues.
From Teſſell to Bockeneſſe northweſt, and n. weſt and by n. ſomewhat weſterly 123 leagues.
From the Marſdiep to Aberdine n. w. ſomewhat northerly 119 leagues.
From the Marſdiep to the Liet of Berghen in Norway north 110 leagues.
From the Marſdiep to the north end of Hitland n. n. weſt. 165 leagues.
And then you ſhall fall about five leagues to the eaſtwards of the land.
From the Marſdiep to the Naze n. and by eaſt 94 leag.
From the Maes or Goeree to Dover, ſouthweſt and by weſt ſomewhat weſterly 33 leagues.
From the Maes to the north Forland, weſt ſouth weſt weſterly 31 leagues.
From the Maes to the Naze, weſt 31 leagues.
From te Maes to Hitland north north weſt 180 leag.

Heights.

The Marſdiep lieth in three and fifty degrees, ſaile out of the north ſea, (being in that height) eaſt on, and you ſhall fall right with it.
The north ſide of the Maes lieth in 52 degrees.

How theſe Lands doe ſhew them ſelves at Sea.



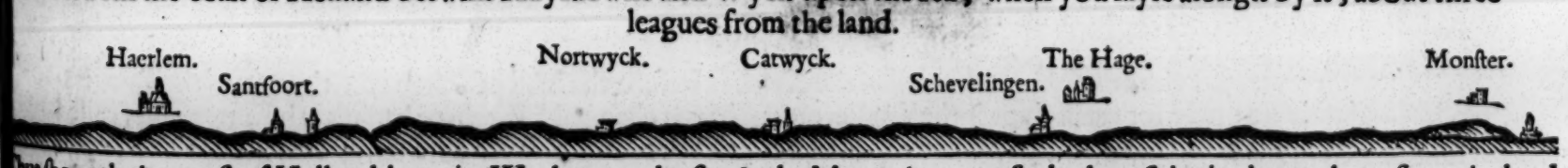
Thus appeareth the Iſland Teſſell, when it lieth eaſt and by north from you,



Huyſdowne ſheweth it ſelfe thus, when it is eaſt ſouth eaſt from you.



Thus ſheweth the coaſt of Holland betwixt Huyſdowne and Wyck upon the ſea, when you ſayle alongſt by it, about three leagues from the land.



Thus ſheweth the coaſt of Holland, betwixt Wyck upon the ſea, & the Maes, when you ſayle alongſt by it about a leag. from the land.



Theſe two figures belong to the A A one to the other.

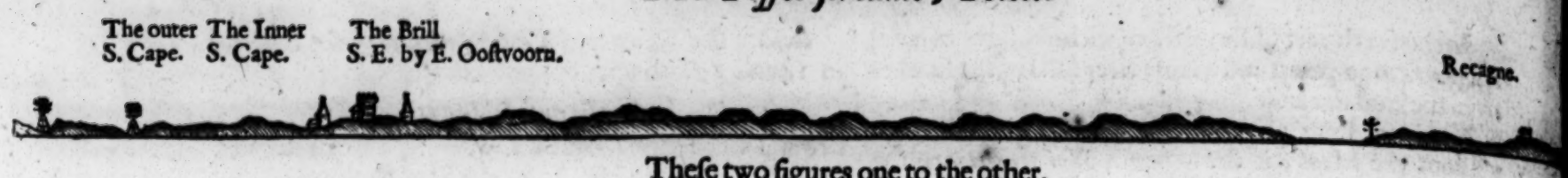


When Graveſand is ſouth eaſt and by ſouth from you, being a halfe league without the land; then the coaſt of Holland to the northwards of the Maes ſheweth it ſelfe, as is portrayed in the two figures here above.



When you are open before the Maes, the land to the northwards of it ſheweth it ſelfe thus:

The



Theſe two figures one to the other.



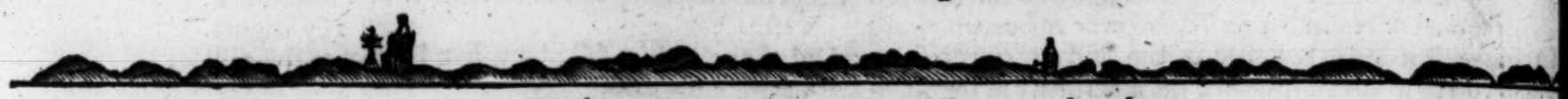
When you are upon before the Maes, being north weſt and by weſt from the Brill, then the land to the ſouthwards of the Maes ſheweth it ſelfe, as is prefigured in the two figures here above.



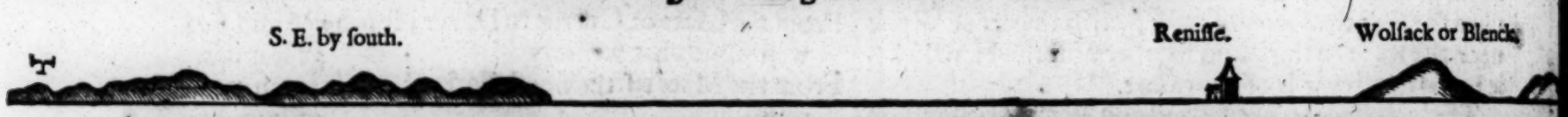
The two figures following belong unto this at the AA and BB, one to the other.



When you are before the Goereeſe gat, about a league without the land on both ſides of it ſheweth, as is demonſtrated in the three figures here above.



Theſe two figures belong at the croſſes one to the other.



The land of Goeree ſheweth it ſelfe, as is pourtrayed in the two figures here above, when the cape and ſteeple come one to the other, and that you are a league and a halfe without the land.

The third Demonſtration.

Which unfoldeth

All the Chanells betwixt the Maes and the Whielings, as that of Goeree, Brewers-haven, Zierick-zea, the Veer and the Whieling.

CConcerning the Situation betweene the Maes and Goerees-gat, wee have handled ſufficiently in the diſcription of the River Maes. Betwixt the land of Goeree & Schowen there goe in alſoo two channels, the norther moſt is called the Kevitſen, (which is onely for ſmall ſhips) the ſouthermoſt for great ſhips is called the Brewers-havens channell, betwixt them lyeth a great dry ſand, called the Springer, which floweth not under, but with very high floods.

Kevitſen For to finde the Kevitſen, you muſt bring the ſteeple of Zierick-zee ſoutheaſt and by ſouth, or a little more ſoutherly from you, and then you ſhall eſpy upon the land of Schowen, about the ſteeple of Zierickzee, a wood of trees, bring that and the foreſaid ſteeple of Zierick-zee one in the other, and runne ſo right in untill you come againſt the ſand, ſo ſhoaler ſo neare as you can, and then you runne farre enough alongſt to the weſtwards of the weſt head. When you come within the weſt head, againſt the ſand on the ſouth ſide, then goe in eaſt alongſt by the foreſaid dry ſand the Springer, at the end of the a foreſaid dry ſand ſhooteth off alſo a point under water, the which you muſt ſound for: being paſt that, runne then directly with Brewers-Haven as is ſhewed in the Card. In this channell it is upon the ſhoaleſt ten foot deep.

The Brewers-Haven.

Before the land of Schowen, thwart of the Brewers-haven channell, lye three bankes, the outermoſt, called the Breebanke, lyeth a kenning without the land, upon which it is 7 fathom deep, and againe within it, 19 fathom deep, upon the ſecond nearer the ſhoare, it is five fathom deep, and againe within it 7 fathom deep; the the third called the Ooſter, lyeth cloſe by the Land, and runneth into the eaſtwards, betwixt Schouwen and the land of Goeree, upon it is no more then ſix foot water, when you will ſayle into the channell of Brewers-haven, you muſt goe about to the Weſtwards of it.

Upon the weſt end of Schouwen ſtand two Capes, bring them one in the other, and runne ſo right in with them, untill the ſteeple of the Reniſſe (which ſteeple is ſomewhat ſharpe) come to the Blenck or Wolfack, that is, a high white ſandhill, (which ſheweth it ſelfe out in whiteneſſe high above all the other Sand-hills) then leave the Capes, and runne in by the marks of the Blencke Reniſſe. Wolfack.

and



Den Briel

t Lant van Vooren

Duvelandt

Goeree

t Lant van Goeree

TLANT

SCHOW-

VEN

De Cust
van
ZEELANDT.
Begrypende in sich de gaten, als
vande Wielingen, ter Veere,
Ziericzee, Brouwershaven,
Goeree, en de Maes

Duytſche mylen 15 voor een graet

Spaenſche mylen 17½ voor een graet

Fran. en Eng. mylen 20. voor een graet

van Cats

Kortgeen

Weſtkerck

Armuyden

Per Veer

Middelburg

Vliſſingen

W A L C H E R E N.

VLAENDE-REN.

Breſkens

Cadſand

Oſt Soubourg

Weſt Soubourg

Oſtenburg

Bisjum

Stum Diep

De Put

De Weſt Put

Drooge Ram

Ram

Hoeve Gats

Hoeve Bank

Weſt Bank

Oſt 66 Bank

and Reniſſe, untill that Outdorp, (a little white ſteeple upon the Land of Goeree) come to the ſteeple of Goeree, and ſo you ſhall goe in betwixt the Ooſter of the larboard ſide, and the Hill on the ſtarboard ſide, and alongſt a little to the ſouthwards of the outermoſt buy, untill you come within the Ooſter. When that Outdorp & Goeree are one in the other, then leave alſo the foreſayd markes of Reniſſe, and runne in right with Goeree, untill that you come by the ſecond buy; or (if there lye no buyes) untill that the Bommenee come a little without the Oxetayle, that is a poynt of Schowe, lying out a little to the weſtwards of Brewers-haven, ſayle ſoo right in untill you are paſt the Brewers-Haven. This Channell of Brewers-Haven, is a broad and deepe Channell, very convenient for great ſhips, he that muſt turn in or out to windewards, may runne alongſt a good wayes on both ſides, as well of the outermoſt as of the ſecond-buy, but to the ſouthwards of them it is deepeſt, and the common fareway. The third buye is a buy with a tayle, and lyeth upon a point of a tayle, which off from the Ooſter, which you may not goe to the northwards of, untill it were very cloſe alongſt by it: all alongſt by the ſtrand of Schowen, it is deepe and ſteepe, you may runne cloſe by it from the outermoſt buy unto Brewers-Haven, there is nothing that can hurt you, the ſhoaleſt of this Channell is eighteen or nineteene foot; at leaſt a league without the land in the comming in betwixt the Ooſter and the Hill. Further inwards it is foure, five, ſix and ſeven, and at ſome places ten and eleven fathom, as it is ſhewed in the Card by the numbers of Feet, and all at low water.

The Keel, the Newdeep, the Velt, and the Roompot.

You may run into Zierickzee through divers channels, through the Keel, the Newdeep, the Velt, & the Roompot. For to ſayle through the Keel, then run in as is before ſaid of the channel of Brewers-haven, firſt in by the marks of the Blench and Reniſſe, ſoo long until that Ter-Veer come to the weſtermoſt point of Schowen, called the Hoot, keepe them one in the other, or to the other, & run ſoo in untill you come by the ſtrand, & then forth by it, & you ſhall find ſo in the Keel at the ſhoaleſt 18 and 19 foot, and comming againſt the point of the Hoot, foure and five fathom. Betwixt the Hoot and the New-ſand (which falleth at the eaſt end in ſome places dry) run all alongſt by the land of Schowen, until you come thwart of the ſouthermoſt cape of Schowen, edge then ſomewhat off from the ſhoare towards the Baniard, for to avoid a Share which lieth off from Schowen, which you might ſaile within when you come out of the ſea. There lieth a buy upon the point, whereby it is eaſy to be known: being paſt that, run all alongſt by the ſhoare, untill you come to Zierickzee: ſomewhat within the buy, upon the point of the ſhare, there is lately laid another little buy for thoſe that wil ſaile that waies out, for that they may not ſaile upon the eaſt ſide of the foreſayd ſhare.

For to ſaile in at the New-deepe, you muſt looke out for two ſtone fire-beakons, ſtanding a little to the ſouthwards of the foreſayd Capes of the Channell of Brewers-Haven, bring the innermoſt a handſpikes length to the ſouthwards of the outermoſt, and runne then right in with them, and then you ſhall runne in betwixt the Hill and the New-Sand in ſixteene, ſeventeene, and 19 foot, goe in alongſt by the foreſaid markes, untill that you come by the ſtrand, and then you come into the Keele. If you bring the fire-beakons one in the other, & ſayle ſo right in, you ſhall then runne over the tayle of the Hill in eleven or twelve foot. The Hill is a land ſomewhat flat, which men may come neare to the ſouth ſide by their lead, but the Newſand is very ſteep, and the ſea breaketh very much upon it. When as you come in by the ſtrand into the Keel, then run in alongſt by the ſtrand, as is before ſaid in the deſcription of the Keel.

For to ſayle in at the Velt, you muſt obſerve theſe marks here under deſcribed: almoſt upon the ſouthermoſt end of Schowen ſtandeth a Tower alone in the field, with a cape upon it, called Weſt-Schowen, bring that Tower a capſtane barres lerigth to the ſouthwards of the foreſaid ſouthermoſt cape of Weſt-Schowen, and runne ſo right in, and then you ſhall runne through betwixt the Newſand and the Baniard, and ſhall finde upon the ſhoales (thwart of the outermoſt poynt of the Newſand) twelve and fourteene foot; being paſt that, there will be againe fifteene, ſixteen, and eighteen foot, and by the ſtrand twenty foot deep. When you come in by the ſtrand, runne all alongſt by it untill you come even to Zierick-zee, as here before is ſayd of the Keel, and Newdeepe. When you runne in at this channell, you muſt take very good heed of the Banjard, which is very ſteepe upon the north ſide; cloſe to it, there is three, foure, and five fathom. but thwart of the foreſayd ſtrand which lyeth of from Schowen, ſixe and ſeven fathom deep. The New-ſand is indifferent flat on the ſouth ſide, that you may borrow of it by your lead. The Velt

The Veer-gat.

For to ſayle in the Veer-gat (comming from the northwards) you muſt keepe Weſt-cappell not to the weſtwards of ſouth from you, and then you cannot come to neere the Banjaer: but if you bring Weſt-cappel to the weſtwards of the ſouth from you, you ſhould lightly ſayle upon the Baniaert, runne ſo right with Weſt-cappell, untill that Middelbrough come over Eaſt-cappell, then you are to the end of the Baniaert, ſayle then right with Eaſt-cappell and Middelbrough, untill that Cortgeen come through or a great capſtane barres length to the Southwards of Weſt-kercke, they are two Towers ſtanding in the ſuncken land, and ſhall bee then about eaſt ſoutheaſt from you, keepe theſe Towers ſoo ſtanding, and run in ſo right with them, and you ſhall runne in ſight of the firſt buy of the Veer-gat. In the Veergat lye three buyes with two bottomes, of faſhion like great Hogſheads, which you muſt leave all on the ſtarboard ſide. Before you come to the firſt buye, you ſhall ſayle by another buye on the larboard ſide, lying upon the poynt of the Polle, which is a poynt of the Baniaert, that is, a Peare buye, of faſhion like all other ſeabuyes that lye in the Maſe or elſwhere. The foreſayd firſt buy in the Veergat lyeth in three fathom and a halfe. From the firſt to the ſecond and third buye, the courſe is ſoutheaſt and by eaſt, or ſomewhat more ſoutherly, but you may eaſily ſee from the one to the other. The ſecond and third buyes lye in two fathom, each upon a poynt of a plate, called the Maide. Over againſt the third buye lyeth a ſhoale called the Unreſt, which lyeth with a long ſharpe poynt towards the third buye, ſoo that it is not there very broad betwixt them, therefore you muſt runne cloſe alongſt to the northwards of the buye: betwixt the buy and the foreſayd poynt of the Unreſt, it is not deeper then twelve and thirteen foote, but thwart of the firſt & ſecond buye, it is broad and deepe enough. Being paſt the third buy, ſayle then right to Ter-Veer. Over againſt Ter-Veer lyeth a plate, called the Scotſman, which you have onely to avoyd.

Markes of the Baniaert.

The Polle.

Mayd. Unreſt.

If you will goe in at the Roompot to Zierick-zee, and that you are come betwixt the foreſayd Peare buy upon the poynt of the Polle, and the firſt or outtermoſt buy of the Veer-gat, then commeth Domburgh to the Hoot, which is a white ſand-hill upon Walcheren, allmoſt of faſhion like the Woolſackes upon the land off Schowen: keepe them one in the other, and you ſhall runne alongſt by two buyes more, which ſhall lye on the larboard ſide alongſt by the Polle, and you ſhall ſee one buye with a tayle lying upon the weſt poynt of the Wool-plate, over againſt the third buye of the Polle: betwixt theſe two buyes you muſt run through, leaving that with the tayle on the ſtarboard ſide, & runne about by it to the eaſtwards, There lye alſo two buyes with tayles, (beſides the foreſayd) upon the Wool-plate, you may eaſily ſee from one to the other,

For to ſayl in at the Roompot.

Wolplate.

theſe you muſt leave on the ſtarboard ſide,& runne alongſt to the northwards of them, about eaſtſoutheaſt on, ſo long till the ſteeple of Koukercke (upon Schowen) come even without the poynt of Schowen, runne then in right with that poynt, & about by it, and then alongſt by the ſhoare unto Zierick-zee. When as you runne towards the poynt of Schowen, then you ſayle through betwixt two buyes more, the one lying on the ſtarboard ſide, upon the eaſtermoſt poynt of the Baniart, or Hooghplate, and the other with a tayle on the ſtarboard ſide, upon the poynt of another plate, called Poolvoet, lying betwixt the land of Schowen and Oreſand. All the buyes with tayles men muſt leave (in ſayling in) on the ſtarboard ſide, & thoſe without tayles on the larboard ſide.

The Fiſhermen runne (by day) moſt about to the ſ. wards of the Poolvoet-plate, and leave the foreſayd buye with the tayle, then on the larboard ſide; that plate is ſomwhat flat, that men may borrow off it by theyr lead, but they muſt ſound quick: but by night they run by Schowen cloſe alongſt by the ſhoare, which is exceeding ſteepe and needle too.

The Channell betwixt the Iſland Walcheren and Flanders, hath divers deepes, and channells, where men may ſayle in and out through with great ſhippes,as the Bot-kill, the Doorloye,the Splete,and the Wieling. It is commonly called after one of the chiefeſt of the ſame, with the name of the Wielings. The greateſt ſhoales, betwixt which theſe foreſayd channells doe runne through, are: The Raſſes, the Raen, the Engliſh Polle, and the Inner-banck. The Raſſes lye alongſt the weſt ſide of Walcheren: The Raen to the weſtwards of it: The Engliſh Polle betwixt them & the coaſt of Flanders, lying of to the weſtwards with a long ſmall,ribb unto thwart of Ooſtend. The Inner-banck lieth betwixt the eaſt end of the Engliſh Polle & Caſand, which is alſo called the French Poll or the Ript.

The Raſſes.
The Raen.
The Engliſh Poll.
The French Poll.

The Bot-kill.

For to ſayle out at the Bot-kill, you muſt run from Fluſhing within two Cables lengths alongſt by the ſhoare, through betwixt the land and the Geer and the Raſſe, the ſhoare is very ſteepe, ſoo that men may come cloſe by it with great ſhippes without any danger, the Raſſes are flat on the eaſt or the inner ſide towards the land. To the eaſtwards, or to the ſouthwards of Souteland in that fareway it is 5 and 6 fathom deepe, but to the northwards, or to the weſtwards it is deeper, and thwart of Weſt-cappel 8 & 9 fathom. When the Church of Weſt-cappel (which hath a flat ſteeple) cometh over the mill, thwart of that runneth a channell through betwixt the n. and e. Raſſes w. ſ. weſt into the ſea where remaineth at low water no leſſe then two fathom water, keepe Weſt-cappell & the foreſayd mill one in the other, & runne out ſoo by them. When Buyes Church commeth over the foreſayd mill of Weſt-cappell, then keepe them one in the other, and you ſhal runne then right out at the Bot-kil through betwixt the n. Raſſes on the larboard ſide, and a ſand called Calloo on the ſtarboard ſide. In the Bot-kill is not leſſe then 4 f. & a halfe depth, but upon both the Raſſes remaineth at low water, no more then 2 foot and a halfe, and upon Calloo 3 or foure fathom.

Markes of the Botkil.

Querne. To the northwards of the ſand Calloo lyeth yet a plate called the Querne, lying northwards allmoſt untill thwart of Domburgh, betwixt them both is a channell of foure or five fathom depth, called the Eaſter-gat; For to ſayle out there, or to finde it comming in out of the ſea, you muſt bring Weſt-cappell to the northermoſt head,which is a head very good to be knowne,and run out in or thereby. Betwixt the Querne and the land goeth out yet a Land-deep of three fathom & a half. For to find that comming in out of the ſea, you muſt runne to the ſhoare, thwart of Domburg (which is a ſharpe ſteeple) into 3 fathom, or 2 fathom and a halfe, & keepe de ſounding of the ſhoare ſo neare as you pleaſe, and runne in ſo alongſt by the heades, untill you be come within. When you come in at any of theſe channells, and are come ſoo farre to the eaſtwards, as betwixt Buyens Church and Soutland, and that you muſt turne to windwards with an eaſterly wind, then you may ſayl through betwixt the eaſter Raſſes, and the plate to the weſtwards of it, called the Geere, and ſoo come out in the broad channnell into the Dorloy and Splete, and run ſoo about to the ſouthwards of the Geer unto Fluſhing.

Land-Deep.

About 2 leagues without the land of Walcheren lyeth a long ſmall bank, lying ſ. w. and n. eaſt, called the Stone-bank, upon the middeſt where of there is no more then 2 fathom, and upon the north-end of it 3 fathom water. He that wil ſayle in or out at the Botkill, or the channells to the n. of it, the Eaſtergat or Land-deep, muſt ſayle about either to the northwards or to the ſouthwards of that Stone-bank: When Middleburgh commeth over Domburgh, then are you thwart of this Stone-banck,but if you bring Middleburgh halfwaies betwixt Domburgh & Eaſt-cappell, & ſo ſail to the land, then you runne along to the northwards of it. Or els if you bring Weſt-cappell e. ſ. e. from you, in a black valley of the ſand-hills, and ſayle ſoo right in, then you runne alongſt to the weſtwards or the ſouthwards of it. Within the Stone-banck it is againe 8 or 9 & at ſome places 10 fathom deep. Upon the foreſayd marks & courſe, to wit, Weſt-cappell eaſt ſoutheaſt from you in the black valley, you may ſayle right in at the Bot-kil: when that Eaſt-cappell commeth then ſomewhat through Domburgh or to the eaſtwardes of it, then you ſhal get deeper water, goe then towards the ſhoare, & ſoo alongſt by it, as is before ſayd. A little from the ſouthweſt end of the Stone-bank lyeth yet another, but it is not long, called the Oyſter-bank, upon it remaineth at low water about 4 fathom water.

Markes of the Stone-bank.

Oyſter-banke.

The Doorloy.

For to ſayle from Fluſhing out at the Doorloy with ſhips that draw much water, you muſt ſet ſayle when the water is flowed an houre or two, for to come with halfe flood,or againſt the higheſt water to the ſhoales, goe from Fluſhing firſt alongſt by the ſhoare, and then weſtnorthweſt, untill that Weſt-cappell come within two ſhippes length to the poynt of the Sand-hill, to wit, that Weſt-cappell ſtand ſoo much within the weſt poynt of the Sand-hils, bring that alſoo not further out, not neerer to the poynt of the Sand-hills, for els you ſhould ſayle upon the Raen. When that Weſt-cappell ſtandeth ſoo, and S. Anne (a flat Steeple in Flanders to the weſtwards of Sluce) ſtandeth amongſt the eaſt Sand-hils of Caſand, then goe northweſt and by weſt out at the Doorloy. When that S. Anne commeth then to the weſtwards of that foreſayd Sand-hill, then commeth the Caſtle of Sluce, under or behinde that Sand-hill, keep that under, or right to the eaſt ſide of the foreſayd ſand-hils, and then goe out northweſt and by weſt, and you ſhall goe cleare of the Raen and the Raſſes. If you bring Weſt-cappell without the Sand-hills before that Saint Anne come without the foreſayd Sand-hills of Caſand, then you ſhall be to farre to the northwards, and to neer the Raſſes. Or if you bring Saint Anne without the Sand-hills of Caſand, before Weſt-cappell come to the end of the Sand-hills, then you ſhall be to farre to the ſouthwards, and ſhall come againſt the Raen, but when you bring Weſt-cappell to the poynt of the Sand-hill, and Saint Annes without the Sand-hills of Caſand one as ſoone as the other, then you are amid the channell of the Doorloy right in the fareway.

For to finde the Doorloy comming in out of the ſea.

For to find the Doorloy comming in out of the ſea, you muſt run to the Raen by the lead, untill that Weſt-cappell come within a maſts length neere to the Sconce, and ſayle ſoo right in, or take the ſounding of the Raen, and run alongſt by it, untill that S. Anne come to the foreſayd eaſt Sand-hill of Caſand, then goe in alongſt ſouthe. and by eaſt, and you ſhall ſoon be over the ſhoaleſt, and find deeper water, but you muſt reckon wel your tydes, for

for the flood falleth in to the Doorloy firſt ſouth (as alſo the after-ebbe) afterwards ſouthſoutheaſt and at leaſt to the ſouthwards. Therefore if you will goe in at the Doorloy with a fore-flood, you muſt go at leaſt eaſtſouth-eaſt, or els (if you ſhould goe in upon your direct courſe) you ſhould lightly be carried againſt the Raen. Comming then out of the ſea alongſt by the Raen, untill that S. Anne be hidden amongſt the ſand-hils of Caſand, then goe on eaſtſoutheaſt, untill that Weſtcappell come within the poynt of the ſand-hils, and then run boldly right on with Fluſhing. In darke weather men may ſound alongſt by the Raſſes; when that you keep the Caſtle of Sluce to the eaſtwards of the foreſaid ſand-hill upon Caſand, then you cannot take hurt of the Raen, but when the Church of Sluce ſtandeth to the weſt ſide of the foreſayd ſand-hills, then you are thwart of the ſhoaleſt of the Raen.

The Splete.

For to ſaile from Fluſhing out at the Splete, you muſt goe on firſt (as is before ſayd) weſtnorthweſt, untill that weſt-cappell come almoſt to the poynt of the ſand-hils, but not without it, or that the ſteeple of Middlebrough come to the Inner ſand-hill, then goe weſtſouthweſt, and then you run out at the Splete, which is more then a great halfe league broad, and at low water upon the ſhoaleſt 4 fathom and a halfe deepe. Betwixt Soutland and Dyſhoeck lieth a high ſand-hill, which is at the eaſt end ſomewhat ſteepe, called the Doorne-hill, to the eaſtwards of it lieth another ſand-hil, which is ſomwhat long, not altogether ſo high as the Doorne-hil, with a clift or little dale in it, which doth (as it were) divide the long ſand-hill in two ſand-hills, the ſouthermoſt is called the Inner ſandhill, becauſe that to the ſouthwards of it there are no more high ſand-hils. When that the ſteeple of Middlebrough commeth over that Inner ſand-hil, or in that foreſaid clift, and keepe that over it or in it, then you runne out at the Splete, and can take no hurt neither of the Poll nor the Raen.

The Engliſh Poll is ſteepe, but with eaſterly windes men may borrow of it by the lead. The Raen is flat on the Inner ſide as well as on the out ſide, ſo that men may ſound out alongſt by it all the Splete when you cannot have ſight of the foreſayd markes in dark weather, and it is ſo broad, that men have an halfe houres worke for to ſayle thwart over it, but the Engliſh Poll is ſo narrow, that men may runne over it with foure or five caſts of the lead. When that Aerdenburgh commeth without the foreſayd ſand-hils of Caſand, then you are paſt the drye Raen, but it lyeth yet out to the weſtwards with a great flat, ſoo farre to the weſtwards, untill Bridges commeth to the eaſtwards of Blanckenbrough in the Gallow ſherds, which are high ſand-hils to the eaſtwards of Blanckenbrough, where in times paſt was wont a Gallowes to ſtand, then you are paſt all the ſhoales, and may goe your courſe where you deſire to be. Blanckenbrough hath a flat ſteeple ſomewhat higher (but not ſo thick) as Liſwegen.

From the end of the Engliſh Poll lieth a long ribbe (about a ſhot of a caſt peece broad) to the weſtwards, untill paſt Ooſtend, called the Ript, it is hard ſand, and good anchor ground. When Blanckenbrough ſtandeth ſoutheaſt and by eaſt from you, there is upon the Ript at low water ſixe fathom deepe, more to the eaſtwards towardes the Engliſh Poll it is ſhoaler, but the farther to the weſtwards the deeper unto the outerbanck thwart of Ooſtend. A ſhot of a caſt peece to the northwards of that Ript it is deeper, and ſoft ground. Alſo when you come towards the ſouth or ſouthſoutheaſt, a ſhot of a caſt peece over the Ript, it will be preſently a halfe fathom deeper, and ſoft ground, that is, then the other channell of the Wielinge. Therefore when you come out of the ſea, and will ſayle in at the Splete, edge to the coaſt of Flanders, when you are (by your reckoning) paſt Ooſtend, and borrow to it by your lead, untill that you get hard ground, and ſhoaler water, that is then for certaine that foreſayd Ript: having ſound that in ſixe, ſeven, or eight fathom, according as you ſhall be to the eaſtwards or the weſtwards, then edge of againe to the northwards into the ſea, untill it begin to ſhoale, and bee hard ground; keep ſo the ſounding of the Ript untill that you find again deeper water and ſoft ground, runne in then eaſt-northeaſt, and edge now and then to the ſouthwards towards the north ſide of the foreſayd Ript, untill that Bridges commeth to Liſwegen (being a flat and very thick ſteeple) or that Blanckenbrough ſtand ſouth from you, then you come thwart of the poynt of the Raen into the Splete. Then bring the ſteeple of Middlebrough over the foreſayd Inner ſand-hill, betwixt Soutland and Diſhoeck, and run in right with it, e. n. e. on, untill that the caſtle of Sluce come to the eaſtwards of the foreſaid eaſt ſand-hils of Caſand, ſayle then right on with Fluſhing, and ſo you ſhall goe cleare both of the Raen & the Pols. If it ſhould happen in darke or miſty weather, that you cannot ſee Middlebrough, then run in by your lead alongſt by the north ſide of the Ript eaſtnortheaſt until that you find ſhoaling and hard ground of the banck, and ſo you ſhal run in betwixt the Raen and the banck. The weſt end of the Raen is flat, which you may ſound very well. In the channel betwixt the banck, or Engliſh Poll, and the Raen, it is ſoft ground on both ſides, as well towards the Raen, as towards the banck, it doth begin to ſhoale, and to be hard ground. When Heyſt, that is, a high ſharp ſteeple commeth to the fire-beakon, thwart of that is the banck, or Engliſh Poll at the ſhoaleſt, to the eaſtwards of that, the banck waxeth deeper; Being come paſt the ſhoaleſt, if you edge towards the banck, you ſhall finde deeper water, and may run over there at halfe flood with 18 foot, but it is not good to doe it, for not to ſayl upon the French Poll, but keepe all alongſt the ſounding and hard ground of the banck, and ſhape your courſe a little more eaſterly for to avoyd the Raſſes which lye thwart of Soutland, & are ſteepe. When you are come ſomewhat further in; go then eaſt on towards Fluſhing, & you ſhall not come neare any ſhoals. Thwart through the Raen goeth a Slenck where remaineth at low water, not leſſe then 2 fathom and a halfe water; for to finde it comming in out of the ſea, you muſt bring Aerdenburgh a little without the point of the ſand-hils of Caſand, or Weſtchappel in Flanders a little to the eaſtwards of Knock, ſayle then right with it, untill that you get deeper water, or that the ſteeple of Middlebrough come over the inner ſand-hill, & then in alongſt with it. Weſt-chappel in Flanders is a ſhort flat little ſteeple, with a little ſhort blunt ſpire, or cap upon it, but Knock is a ſharp ſteeple not ſo high as Heyſt.

Slenck through the Raen.

The Wielinge and inner-Wielinge.

For to ſaile in at the Wielinge comming in out of the ſea you muſt run on to the coaſt of Flanders, (when you are paſt Ooſtend) untill you come in 5 fathom. Thwart of Blanckenbrough there was wont a few yeares paſt, to lye a bancke or ſhare off from the ſhoare, which men might ſaile within, comming from the weſtwards: now there is nothing but a little flat, and Dobbelſand is alſoo altogether cleane gone. Or elſe you muſt looke-out for Liſwegen a flat ſteeple, and the thickeſt thereabouts. When the ſteeples of Bridges, (being called the Bruggelingen) ſtand a cables length to the weſtwards of Liſwegen, then are you yet to the weſtw. off all the ſands, polles, and banckes, keepe theſe ſteeples ſo ſtanding and runne on to the coaſt, until you come over the foreſayd Ript, and that you find again ſoft ground, and more depth, untill you come in 5 fathom, go then n. e. and n e. and by eaſt with a flood, or northeaſt and northeaſt, and by north with an ebbe (reckon well your tyde, which runneth there moſt e. ſ. e. ſomewhat ſoutherly, and w. n. w. ſomewhat northerly, and the tyde runneth but a little

houre alongſt the land) keep the ſteeple Wenduynen one or 2 ſhips lengths without the Sconce of Blanckenbrough, ſo long as you can ſee them, and ſtil in 5 fathom; when as Heyſt commeth then to Bridges, and Weſtcapel to Knock, then are you right in the fareway of the Wieling, the nearer that you are to the bancke of the Engliſh Poll, the deeper water you ſhall finde, except that you have the ſhoaling of the banck it ſelfe. Bridges muſt come firſt to Heyſt, or elſe you ſhould be to farr to ſeawards, or to neare to the Engliſh Poll; with a fore-flood you may bring them both at once together, but not with a fore ebbe. If you get then ſhoaling, that is, of the Engliſh Poll, goe from thence alongſt the ſame courſe, through betwixt the Engliſh Poll and the French Poll, or Innerbanck, that is a hard ſand and ſteep, but the Engliſh Poll is thereabouts flat, which you may ſound. When as that the caſtle of Sluce commeth to Saint Lambert (a high flat ſteeple upon Caſand, to the northwards or to the eaſtwards off the Sluce) then you are paſt the French Poll, goe then eaſt on right with Fluſhing, or elſe obſerve theſe markes following: Liſwegen muſt not come within Heyſt, before the Caſtle of Sluce come to the eaſt ſand-hil of Caſand, but remain without it, or elſe you ſhould ſayle on againſt the innerbanck, when as that the Caſtle commeth to the ſand-hil, goe then boldly northeaſt and by eaſt and eaſtnortheaſt, for to avoyd the French Poll, untill that the ſteeple of Fluſhing come to the northwards of the Priſongate, then you get deeper water: goe then on eaſt, and eaſt & by ſouth right with Fluſhing. There remaineth in the Wieling, as alſo in the inner Wieling at the loweſt water, not leſſe then 4 fathom & a halfe water.

Markes of the French Poll.

The inner Wieling.

The inner-Wieling lyeth in through betwixt the innerbanck, or French Poll, and Caſand. When you come from the weſtwards into the Wieling, and are come ſoo farr, that Weſtchappel come to Knock, and will go in at the inner-Wieling, then goe from thence eaſt and by ſ. on and you ſhall eſpy the buy upon the poynt of the Paerdmarck (that is, a ſand that ſhooteth off from the eaſt poynt of Sluce haven, and is very ſteep) leave that buy on the ſtarboard ſide, & keepe S. Lamberts ſteeple even without the ſ. ſand-hill of Caſand or Sluce haven, and goe on n.e. or ſomewhat more northerly alongſt by the ſhoare, for to avoyd the Krakeſand, when as then the Caſtle of Sluce and S. Lamberts ſteeple come one in the other, then goe on eaſt right with Fluſhing.

Krakeſand.

Flanders is a Land full of ſand-hils and hommocks, with many ſteeples alongſt the coaſt, lying from the Haven of Sluce unto Callice, moſt w. ſ. w. and e. northeaſt. The firſt ſteeple to the weſtwards of Sluce is S. Anne a flat ſteeple, and then Weſtchappell a little ſhort flat ſteeple, with a blunt cap upon it. Heyſt to the weſtwards of them is a long ſharpe ſteeple higher then Knock. Betwixt Heyſt and Blanckenbrough, lieth Liſwegen ſomewhat within the land, that is a flat ſteeple, & the thickeſt of all the ſteeples there abouts. Blanckenbrough is alſoo a flat ſteeple higher then Liſwegen, but not ſoo thick. Within the land from Blanckenbrough ſtandeth Bridges, two thick ſharp ſteeples upon one Church, to the weſtwards of Blanckenbrough a great halfe league lyeth Wenduynen a ſharp ſteeple.

Of the tydes & courſes of the Streames.

Before Brewers-haven, a ſouthſouthweſt and northeaſt Moone maketh high water.

In the Channell of Brewers-haven a ſouth and by weſt Moone.

At Ter-Veer a ſ. ſ. w. and n. n. e. Moone.

In the Veer-gat a ſ. and n. Moone.

It is not good to runne in at Veer-gat, eſpecially with a ſoutherly or ſouthweſt wind, before that the flood be halfe ſpent, for the after-ebbe, and the fore-flood fall thwart over the Baniaert hard in at the Roompot, towards the land of Schowen, but when the flood is halfe ſpent, then it falleth right in at the Veer-gat. When the Moone is ſoutheaſt, or northweſt, then the water is there already two third parts flowen.

Like as it is here before ſayd of the Maſe and the Goerees-gat, ſoo alſo here before the channels of Brewers-haven and Ter-Veer the flood turneth about with the Sunne, ſoo that the after-flood falleth in the channels, and then afterwards turneth about to the ſouthwards, and becommeth a running ebbe, but the after-ebbs fall right out at the channels thwart into the ſea, and then with the fore-flood about againe to the northwards.

Before the Wielings a ſouth and by w. and a ſ. ſ. weſt Moon maketh the higheſt water.

At Fluſhing & Ramekens a ſ. ſ. w. Moone.

At Weſt-chappell on the land of Walcheren, a ſouth and north Moone maketh high water. When the water is a halfe houre fallen, then the tyde beginneth to fall out there, and when it is flowen a halfe houre, it beginneth to fall in: but before the Botkill it beginneth to goe there firſt an houre before the loweſt water, but it falleth long at ſea. In the Splete, and over the ſhoals lying there abouts, the tyde turneth about againſt the Sunne, and at leaſt falleth in at the channels. A ſouth and north Moon maketh there the higheſt water. The fore-flood falleth over the ſhoals there towards the land. When the Moone is about eaſtſoutheaſt, or that the water bee about two houres flowen, then it beginneth to turne towards the ſouth, firſt ſouthſouthweſt, and then paſt the ſouth towards the eaſt, untill that the Moone be ſouthſoutheaſt, and then the flood falleth to the eaſtwards. When Blanckenbrough ſtandeth about ſoutheaſt and by eaſt from you, from thence to the eaſtwards, the tyde turneth about againſt the Sun, but from thence to the weſtwards, you ſhall not finde the tydes to turne about.

Againſt Zealand in the fare-way a third part of the flood falleth towards the land, and afterwards eaſt and by north. Men may ſee Zealand from the poope in 16 fathom.

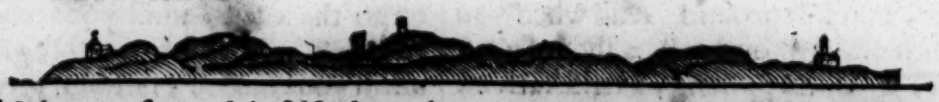
Courſes and Diſtances.

From Fluſhing to Blanckenbrough neareſt Weſtſouthweſt, 9 leagues.
From Blanckenbrough to Ooſtend ſouthweſt and by weſt. 2 leagues.
From Fluſhing to the north Forland, weſt ſomewhat ſoutherly 25 leagues.
From the Wielings to Dover w. and by ſouth 26 leagues.
From the Wielings to Lay-ſtaſſe or Yarmouth, north weſt 32 leagues.

Heights.

Fluſhing, Ramekens, and the ſouth coaſt of Walcheren lye neare in 51 degrees and a halfe.

Brewers-Haven.



The land of Schowen ſheweth it ſelfe thus when it is three or foure leagues thwart from you.

Blenck

Duytsche mylen 15 in een graat

Spaensche mylen 17½ in een graat

Eng. en Fran. mylen 20 in een graat

F S L A N D

Brugge

Sluys

't Slot

Cadsant

S. Lambert

Breskens

Vlissingen

West Souburg

Middelburch

Coudorcke

WALCHE

Batkercke

REN.

Burens kercke

Oostcapel

Westcapel

Domburg

Geese

Oudenborgh

Oostende

Nieu

Ackart

Wenle

Schoonevelde

De Put

De Westt Put

Den Hoeklag

Banjaert

Ooster 8 hant

Sloen 8 hant

Westen 8 hant

Wester 8 hant

Noorder Raseem

Oosterse Raseem

Drogen Ram

Ram

Inner wielings

Buiten wielings

De Wielings

De Spleet

De Ratt

Thapi

Bomme Sande

Middelbrouck

Westsande

Lombertsijde

Nieuwpoort

Irtgat

Oost Schelderlag

Gote

Noorder Gote

Wester hant

Oosterse hant

Oost 11 hant

Oosterse hant

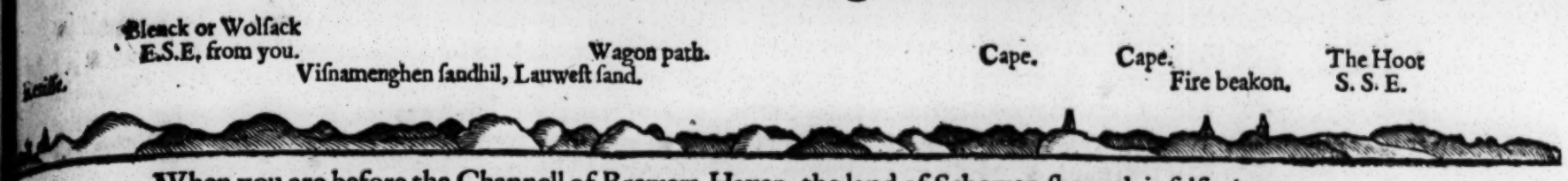
Oosterse hant

Oosterse

De Cuſt van VLAENDEREN

Beginnende vande wielingen tot aen de Hoofden met alle haer ſanden en droogten.

Wyndsberge
Caſſel
Spykeroog
Borborch
Vaerne
Groot Sinten
S. Joos
Duynkercken
Clein Sinten
Leyen
Grevelingen
Oye
Waldamme
Ambleteuse
Cales
Cales cliff
Swartenes
Braeck
Ridding off
Sandt hanck
Broe hanck
Razeberg
Ratel
Dyck
Rauninge
Polder
't Cliff
Block van Duynkercken
Goevingh
Doveren Duyns
Sandwich
Queerens
't Voorlandt
Margat
ENGELANT
38.



When you are before the Channell of Brewers-Haven, the land of Schowen ſheweth it ſelfe thus.



Thus ſheweth Walcheren when you are in the Doorloy, or before the Splete.



Thus ſheweth the coaſt of Flanders from Blanckenbrough eaſtwards, when you ſayle in or out at the Wielings.

The fourth Demonſtration,

Which unfoldeth

The Coaſt of Flanders, from the Wielings to the Heads, about Callice, together with the Coaſt of England, from Dover to the north Forland.

BEtwixt Wenduynen & Blanckenbrough ſtandeth another little ſteeple, called John Davids ſteeple. Ooſtend lyeth a great league to the weſtwards of Wackerhout. A halfe league to the weſtwards of Ooſtend, lyeth S. Catelyn, and a league to the weſtwards of it is Midlekerck, being a high thick flat ſteeple. From Middle-kerck to Newport it is two leagues, there is a flat ſteeple with a little ſharpe ſteeple. A little to the eaſtwards of Newport lyeth our Lady of Lombardy, a high flat ſteeple.

From Newport to Broers it is two leagues, and from Broers to Dunkercke three leagues. The Southkoten is a league to the eaſtwards of Dunkerck. Dunkerck hath a high flat ſteeple, with a little ſharpe ſteeple. From Dunkerck to Graveling are three leagues, betwixt them ſtand theſe ſteeples, firſt little Sinten a little ſharp ſteeple, great Sinten a thick flat ſteeple, Mardycke a thicke flat ſteeple, and S. Georges a high ſharpe ſteeple, Graveling hath no ſteeples, but there ſtand two mills, one on the Eaſter-gate, and the other on the weſt end of the towne. From Graveling to Callice are three leagues. Callice hath many ſharpe Steeples, where of one is higher then all the reſt, and betwixt both lye theſe villages moſt without ſteeples. Firſt Hoghenpryſe and Daſen, two flat ſteeples; more Valdam a flat Church with a little ſpire upon the middeſt of it, that is all the knowledge of Flanders. The Coaſt of Flanders betwixt Callice and Blanckenbrough, is foure and twenty leagues long, or as ſome ſay, one and twenty leagues, and Blanckenbrough from Fluſhing nine leagues. Soo that Fluſhing is from Callice, at the leaſt 30 leagues, or as ſome ſay 33 leagues at the moſt.

That which is here ſayd of the ſteeples and leagues alongſt the coaſt of Flanders, is very ſerviceable and needfull as well for that which is before deſcribed of the Wielings, as alſo for the ſayling into the havens of Flanders, but eſpecially for the knowledge of the Flemiſh bancks.

Ooſtend. For to ſayle into Ooſtend, you muſt run cloſe to the eaſtwards of the towne into the haven, called the Gueule on the eaſt poynt of the haven lyeth a head, where upon ſtandeth a beakon, you muſt run cloſe in by that head, there it is deepeſt, from the weſt ſide to wit towards the towne, ſhooteth of a little flat, whereof you muſt avoyd that ſide a ſhips length or 2, at low water and a common tyde remaineth in this havens mouth 6 foot, and at high water there is two and twenty foot water. A little within the haven you may anchor where you will; and at low water you may lye there with a great ſhip a float.

Newport. Newport is a tyde-haven, which falleth altogether dry at low water, and at high water and a common tyde there is 13 foot water, cloſe before the havens mouth is a bank, which lyeth from the eaſtwards of the Haven of Newport over to the weſtwards, thwart before the Havens mouth, and at halfe flood lyeth dry, and at high water there commeth no more upon it then eight foot water.

For to ſayl into Newport. He that will goe into Newport, muſt go in from the weſtwards betwixt the foreſayd banck and the land, and ſayle unto the ſouthwards of the banck ſoo long untill that the innermoſt beakon come even through, or to the eaſtwards of the outermoſt, and then run in ſo right by them, & in alongſt amidſt the channell betwixt the heads. Betwixt the banck and the land it is on both ſides flat riſing ground, ſo that you may ſound the ſhoares on both ſides, but on the north ſide the banck is ſomewhat ſteep, it is 3 fathom deep cloſe alongſt by it. Within the havens mouth it is ſet on both ſides of the deep with beakons, where you muſt run through betwixt, untill you come before the Towne, which lyeth about a Cannon ſhot from the ſea ſide. There is fire in the night upon the two great beakons, out not longer then from halfe flood to half ebbe.

From Newport to Dunkercke alongſt by the ſhoare through within the banckes, it is cleane without any foule ground or bancks, and at low water fifteene foot deepe, the neerer the ſhoare the deeper. Thwart of the Cloyſter Ten-Duynen betwixt it and Broers banck, it is narroweſt, which lyeth not farre from the ſhoare, thwart of it you muſt goe cloſe alongſt by the ſhoare.

Quade-banck. The Quade-bancke runneth of to the eaſtwards of the head of Dunkercke, at leaſt two leagues to the weſtwards ending thwart of the heads of Dunkercke. To the eaſtwards of the eaſter head of Dunkercke men may anchor behinde this banck, and lye ſheltred for a northweſt, north, and northeaſt winde, it is two fathom deepe there at low water, but in the comming in, it is ſhoaler. Before the Havens-mouth of Dunkerck, it is 9 and ten fathom deepe, and to the weſtwards of the weſter-head of Dunkerck 6, 7, and 8 fathom, from thence men may runne over the ſmall banck in three fathom, and come againſt the Broad bancke. This ſmall bancke lyeth right thwart before the Haven of Dunkerck, to wit, betwixt Dunkercke and the Broad-banck.

Smal-banck.

For to ſayl into Dun-kerck. For to ſayle into Dunkerck you muſt bring the fires within

within a capſtane barrs length one to the other, to wit, the innermoſt ſo much to the eaſtwards of the outtermoſt, keep them ſoo, and run in then cloſe alongſt by the eaſter-head, the weſter-head lyeth ſomewhat further of into the ſea then the other, thwart of it lyeth a ſandplate with ſome pales, therefore you muſt avoyd it, and runne in cloſe alongſt by the eaſterhead it is a narrow haven, & at high water and a common tyde there commeth no more then 12 foot water. In the night they doe fire there as at Newport, from halfe flood to halfe ebbe, and the loweſt fire-beakon ſtandeth next unto the ſea.

The Splinter.

From the weſter-head of Dunkerck runneth of a bancke about 2 leagues long, called the Splinter, which falleth dry at low water at many places, men may ſayle in by the ſhoare, behind this banck from the weſtwards almoſt to the weſterhead af Dunkerck, and there may come to an anchor in 5, 6, 7 and eight fathom. About halfe a league from the foreſaid weſter-head, there runneth a Slenck through the foreſaid bancke, where little Shippes may goe through at high water.

Graveling.

Graveling is alſo a tyde-haven, where men muſt goe in at high water, there ſtand two beakons, which you muſt keepe one by the other, and ſayle ſo in betwixt the heads, on the weſt ſide runneth off a little riffe, which you muſt avoyd. When you come from the eaſtwards alongſt the coaſt running through Wolbreck Sound, at the end of the Brakes, (that are the banckes before Dunkerck, and from thence weſtwards) then you come againſt the weſt poynt of the foreſayd little riffe or out-ſand off Graveling, which lyeth a good way of into the ſea, to the eaſtwards of it men run into the Haven of Graveling by night right in with the fires.

Newlanden.

To the weſtwards of the Haven of Graveling lyeth a bancke or flat alongſt the ſhoare, lying a good way of from the land to ſea-wards, almoſt as farre to the weſtward as Callice, called the New-Land, men may runne alongſt by it, or over it in five, foure, and three fathom, according as men will.

Callice.

The haven of Callice falleth every tyde altogether dry, and at high water with a common-tyde, there is no leſſe then three fathom water. For to ſayle in there you muſt keepe the mill (ſtanding on the eaſt corner of the towne) right over the eaſter-head, & run in ſoo cloſe alongſt by the eaſter-head, and let the caſtle lye on the weſt ſide of you, from the weſter head runneth of a little riffe, therefore you muſt avoyd it. When you are come in within the weſterhead, you muſt goe up to the weſtwards into Paradice, and there lye dry at low water. By night when the tyde ſerveth, there ſtand two fires, you muſt run in right with them. It is not good to come into this haven before high water, becauſe of the exceeding ſtrong tide that runneth in there with the flood, for to avoid the anchors of the ſhips, which lye there within. It is there within dangerous and bad lying, eſpecially with a northerly winde which bloweth there open in.

Thwart of from weſter-head of Callice lyeth a bank of two fathom, betwixt the head or Meyland, and the ſame banke men may runne through in three fathom at halfe flood, the bank is two fathom deepe. Under Callice cliffe at the eaſt end, men may anchor in ten fathom, but at the weſtend lyeth a rocke under water, a bow ſhot from the land. Callice cliffe lyeth betwixt Callice & Blanckneſſe.

Callice-cliffe.

Of the Flemiſh Bancks.

Weſt from Weſt-cappell, and northweſt from Ooſtend, about nine leagues without the Coaſt of Flanders, lyeth a little plate, whereupon at low water is no more then two and twenty foot water, in foule weather the ſea breaketh very much upon it.

The Trick.

About two leagues from Ooſtend without the land lyeth the Trick, or outerbanck, upon it there is no more then fifteen or ſixteen foot water. When S. Catherines ſteeple commeth againſt Ooſtend, then you come on againſt this banck: betwixt this bank and the heads of Ooſtend, lyeth another bank of three fathom water.

Betwixt Ooſtend and Newport lye foure bancks, all which foure begin about thwart of Ooſtend, the two neareſt to the lands end thwart of Newport. The other lye all alongſt the land almoſt to Dunkercke: the firſt and neareſt to the land is called the Geere, betwixt that and the land goeth a channell through, of 8. 9. & 10. fathom. The Geer.

The ſecond called Laland, endeth alſo againſt Newport, betwixt theſe two goeth a channel through of eight and nine fathom. Laland.

The third are two banks one to the other, the eaſtermoſt ending halfe wayes: Laland is called Stroom, the weſtermoſt ending thwart of Dunkerck, is called the Stone-bank which hath on the eaſt ſide a hooke, which lyeth to eaſtwards, running to nothing allmoſt againſt Newport: this bank is three or foure fathom, and upon the eaſt end five & ſix fathom. Stroom. Stone-banck.

The fourth is alſoo in two banks, the eaſtermoſt is called Sandele, or Oudemoers bank, and the weſtermoſt Cal bank, of ſome called alſoo Small bank, which lyeth alongſt by the Broad-bank: but that outer end lyeth at leaſt two great leagues of. Sandele. Calbank. Oud-moers Banck.

The ſhippes that will goe before Dunkerck & cannot get alongſt by Flanders, doe runne about without theſe bankes, untill they come againſt Broad-banke, and then runne in alongſt by it 5 or 6 fathom. The Channell is 15 fathom deep, and every one of theſe foure bankes hath a dry Poelder. When 2 Steeples (that are ſomewhat flat to the ſouthward of Newport) ſtand a handpikes length aſunder, then are you thwart of theſe foure bankes here before mentioned, which are not deeper at low water then one fathom, and at ſpring-tydes fall almoſt dry. The Dyke.

Betwixt all theſe bankes you may anchor in 9. 10. 11. and alſo in 12 fathom, you may runne over them, in 4 fathom, but when you are to the weſtwards of them you ſhall finde it deeper, to wit, 8. 9 and 10 fathom.

The Broers banck is three cornerd, and lieth cloſe by the land thwart of Broers and the Cloyſter Ten-Duynen, and lyeth of from the ſhoare about weſtnorthweſt a league into the ſea, when the Cloyſter Ten-Duynen, or the Broers lyeth ſouth from you, then you are at the innermoſt part of the Broers-bank, you may runne through betwixt the land and this banck, in foure fathom at low water; but men doe run commonly about to the weſtwards of it, when they ſayle through within the bankes, alongſt the Coaſt of Flanders. Broers banck.

A little to the weſtwards of Broers-banck lyeth the Cams-banke, which is three fathom deepe, and lyeth in many Raſſes, you may run through betwixt the land and this banke alſo in 8. 9. and 10. fathom, and alſoo may ride there for alt winds. By the land, betwixt this bank and Broers-banck, it is 5 fathom deepe. When you run through betwixt this banke and the land, then you come alongſt by the Quade bank untill you come before the Haven of Dunkerck. When you are a good wayes paſt the head of Dunkerck, about ſ. w. from the Splinter, then you runne over a ſhoale of two fathom, called Wilbaert Sound, being over it you ſhall have againe then 11 & 12 fathom. When Borburger Steeple commeth in the valley of the ſand-hill, then you are thwart of this bancke, by theſe markes you may ſayle through theſe bancks northnorthweſt into the ſea, and come againſt the tayle of the Broad-banck in foure fathom. When as that you doe edge againe ſomewhat towards the land in twelve, thirteene, or fifteene fathom; then you may ſayle through betwixt the Broad and the Small bancke, on eaſtnortheaſt, or eaſt and by north untill you are paſt the Cloyſter Ten-Duynen, or the Broers-Banck, which lyeth off from the Cloyſter about a league into the ſea. To the eaſtwards paſt this banck it beginneth to be ſhoale water againſt Newport foure or five fathom, being paſt Newport, you muſt edge towards the land, in eight or nine fathom, keeping cloſe to the land, and then you ſhal run through betwixt the land and the Geere, (which lyeth alongſt towards Ooſtend:) When you come againſt Ooſtend, then you Broad banck. Wilbaert Sound. Cams-banck.

are

are cleare of the bancks, and then you may run into the ſea for to goe into the Wielings.

There lye yet five long banckes alongſt Flanders. When Graveling is ſoutheaſt from you, then you are thwart of the ſouth end of theſe bankes: & when Newport is ſoutheaſt from you. Then you are thwart of the north end of them they are very long, and betwixt each goeth a wide Channell through, of eight, nine, twelve, fifteene, ſixteen, eighteene, nineteene and twenty fathom deepe, each of a ſeverall high depth.

The outermoſt or weſtermoſt bancke called the Cliffe lyeth from Callice-cliffe northnortheaſt about foure leagues and a halfe, and is three fathom and a halfe deep: betwixt this and the other goeth a wide channell through of three and twenty and 24 fathom deep.

The ſecond called the Ruyting, lyeth from Callice-cliffe northeaſt and by north about foure leagues, and is there five or ſix fathom deepe, but upon the ſouth end of it, is a Poelder of a fathom and a halfe. When the ſouth end of Winocxbergen commeth betwixt the two flat ſteeples to the weſtwards of Dunkerck, then are you thwart of this Poelder.

There ſtand three or foure mils to the eaſtwards of Dunkerck, when the outermoſt commeth over the eaſt end of the towne, that is alſo a good mark of this Poelder or ſhoale, and then the ſteeple of Dunkerck ſhall be from you ſ. e. five leagues.

Betwixt this and the third goeth alſoo a channell through of 12 and 13 fathom.

The third, called the Dyke, lyeth from Callice-cliffe northeaſt, and is deepe foure and five fathom, upon the ſouth and north end of this Bancke are Poelders, the ſouthermoſt is deepe one fathom, and lyeth alſo upon the markes of Winocxbergen about northweſt, ſomewhat weſterly from Dunkerck, & is called the Polder of the Dyke, or Dyke-Polder, the other Polder or ſhoale of this bancke is about foure fathom and two foot deepe, and lyeth n.w. from the Cloyſter Ten-Duynen. Theſe bancks are very dangerous; for the Ruyting lyeth allmoſt in the fare-way, and at low water they have no more then two fathom depth.

The fourth banck, called Kettell-banck, lyeth from Callice-cliffe northeaſt and by eaſt, and is deepe three, foure, five and ſix fathom. Upon the ſouth end is a ſhoale of one fathom water at low water, at ſpring-tydes theſe Polders fall dry. Alongſt by this goeth alſo a channell through of 19 and 20 fathom.

To the eaſtwards of the Kettel-banck, to wit, betwixt that and the Broad-banck goeth through a great channell of 19 and 20 fathom.

In all the channels betwixt the foreſaid banckes, men may turne to windwards every where from one bancke to the other, & anchor betwixt the banckes where they will.

The ſouth end of the Broad-bancke lyeth from Callice-cliffe eaſtnortheaſt, and hath one ſhoale upon the ſouth end of one fathom and a halfe, is throughout three and 4 fathom deepe.

The north end is deep 6, 7, and 8 fathom, and lyeth ſo far to the northward, untill Newport be northweſt from you, or the Cloyſter Ten-Duynen bee northnorthweſt 5 or 6 leagues from you.

The Coaſt of England from Dover to the north Forland.

Betwixt Callice and Dover amiddeſt in the fare-way, (or ſomewhat nearer the French ſide then the Engliſh) lyeth a narrow bancke of foure leagues long, lying about n. n. eaſt, and ſouthſouthweſt alongſt the land of Blackneſſe, being called the Vaen, and by the Dutchmen called Vrow-ſand, of 5, 6, 7, and 8 fathom depth, and runneth to the ſouthwards towards the land of Bulleyn. Weſt and by ſouth from Callice-cliffe, and ſouth and ſouth and by eaſt from Dover, is the ſhoaleſt of it, at low water not deeper then ſixteene or ſeventeene foot. On both ſides of this banck, as well alongſt to the eaſtwards as to the weſtwards of it, it is 20, 22, 23, and 24 fathom deepe. Men may anchor before Dover for a north and northweſt wind, right againſt the Caſtle, in tenne fathom in the beſt road, and cleane ground. For to ſayle into the Downes from the ſouthwards, you muſt run about the ſouth Forland, within two cables length alongſt by the land, and anchor thwart of the middlemoſt Caſtle in 7 or 8 fathom.

The ſouthermoſt poynt of Goodding, and the ſouth Forland lye n. e. and ſ. w. aſunder.

Betwixt Goodding and the Valley in the land off the north Forland, called Ramſgat, lye two ſhoals, whereof the weſtermoſt is called the Quernes, and the eaſtermoſt the Brakes. Goodding.

For to ſayle from Dover (through within the Goodding, betwixt the Goodding and the Brakes,) to the north Forland, you muſt goe on north and by eaſt ſo long untill that the mill upon the north Forland come to the weſt ſide of the Valley in the north Forland, then goe yet north and by eaſt, and northnortheaſt, untill that the little ſteeple upon the North Forland come to the Eaſt-ſide of the foreſayd Valley, then you ſhall bee to the Northwards of the Brakes, and then the little flat ſteeple on the ſouth Forland commeth too, or right over the third white Chalck-hill to the Northwards of the ſouth Forland, that is a direct long marke, for to ſayle through betwixt the Brakes and Goodding, as well when you come from the Northwards as from the ſouthwards.

For to ſayle through within the Goodding from the Northwards, you muſt not come nearer the Brakes then in ſeven fathom, and ſet the ſouth Forland ſouthſouthweſt from you, and ſayle then ſo right with it, and then you ſhall runne alongſt the beſt deepe. When as the flat ſteeple upon the North Forland ſtandeth in Ramſgat or the Valley, then you ſhall be thwart of the Brakes, and when the mill commeth in Ramſgat, you ſhall be to the ſouthwards of the Brakes. Brakes.

When you lye in the Downes, and that the inner point of the cliffe of the ſouth Forland lye ſouthſouthweſt from you, then the Quernes lye north and by eaſt from you, and the end of Goodding n. e. from you. Quernes.

The north end of Goodding, and the poynt of the north Forland, lye ſoutheaſt and by eaſt and n. w. and by w. a league and a halfe aſunder.

For to come from the Northwards into the Downes through betwixt the Brakes and the Quernes: there ſtandeth a Church upon the high land of the ſouth Forland, to the northwards of it, which is a flat ſteeple, and the Church ſomewhat great of body, and there are three Caſtles upon the ſtrand of the Downes, you muſt bring the foreſayd Church with the flat ſteeple right in the middeſt betwixt the two ſouthermoſt Caſtles, and then you are in the fareway in the middle of the channel, and that wil ſerve for a leading mark to run through betwixt the Brakes and the Quernes, and the courſe lyeth through ſouthſouthweſt. If the winde bee ſoutherly, that you muſt turne to windwards through, runne not further over to the eaſtwards then that the foreſayd Church come within two ſhips length of the ſouthermoſt Caſtle, for if you ſhould bring them neerer, or together, then you ſhould run upon the Brake, and being caſt about run not further over the weſtwards then that the foreſayd Church come within two ſhippes length of the three, for if you ſhould bring them neerer, or together, you ſhould run upon the Quernes, and theſe markes will ſerve to turne to windwards through betwixt the Brakes & Quernes, either from the northwards or the ſouthwards. The Brake is ſteep, being five f. cloſe alongſt by the ſide of it, and in the middle of the channell is but 15 foot at low water, ſo that it is deeper by this ſide of the Brake, then in the middle of the Channell. As you turn to windwards, and run over to the eaſtwards towards the Brake, as ſoon as you muſt caſt about, or els you ſhould be againſt the Brake: the Querne is flat, but nevertheleſſe as For to ſayle through betwixt the Brakes and the Quernes.

ſoon

ſoon as you finde it ſhoaler (in running over to the w. wards the Querne) then 15 foote, you muſt caſt about again, and ſo turn through. About halfe a league from the north end off the Goodding to the ſouthwards, lyeth of a flat tayle or ſpit of ſand to the weſtwards from the Goodding, a great musket ſhot of, and falleth dry a good wayes of at low water, which maketh the channell there betwixt the Goodding and the Brake very narrow, the thwart markes of this tayle of ſand are theſe: up within the land, a little to the ſouthwards of Ramſgate, ſtand 3 or 4 high trees together, when theſe trees doe come right over the ſouthermoſt end of the cliffe that lyeth alſoo a litle to the ſouthwards of Ramſgat, then you are thwart of this foreſayd tayle of ſand, as ſoon as you ſhall bee paſt it, then you ſhall have more roome to turne to windwards, and may run further over to the Goodding.

Thwart markes of a tayle of ſand, lying of from the Goodding.

For to ſayle from Dover without the Goodding to the north Forland, you muſt keepe the poynt to the weſtwards of Dover without the ſouth Forland, and goe on northeaſt untill that the north Forland come n. w. and by weſt from you, then you may boldly run to the north Forland, and anchor before Margate, or where that you ſhall think it beſt, but thwart of the ſteeple, where the mill ſtandeth by, is the beſt roade. Or when the poynt of the north Forland lyeth ſouthſouthweſt and ſouthweſt and by ſouth from you, there is alſoo good riding in 8 or 9 fathom. Betwixt Margate & the Reculvers, men may anchor every where in ſixe or 7 fathom at halfe flood.

For to run about a ſea-board of Goodding.

Betwixt the Querns & the north Forland men may alſo run through to Sandwich, there runs of a litle ſtone-banck from the ſhoare, called the Fourefoot, betwixt that and the Quernes it tis at halfe flood two fathom deepe. The Quernes are lately growne much leſſe, and ſhifted, ſoo that the north ende of them is allmoſt gone.

Of the tydes & courſes of the Streames.

Alongſt the coaſt of Flanders on the Land, a ſouth and north moone maketh full ſea.

In the fareway without the Flemiſh banckes in the ſea, a ſ. w. moone maketh high water.

In the middeſt betwixt the Heads, a ſ. w. Moone.

At Dover, a ſouth & north moone.

In the Downes, a ſouthſouthweſt moone.

At the n. Forland, a ſouth & n. moone.

Alongſt the Flemiſh banckes, the fore-flood falleth over the bancks, towards the land, about the third part of the tyde, afterwards alongſt the Land, but the after-flood falleth to the northwards alongſt the ſea in the right fareway.

When the flood beginneth to go there thwart of at ſea, then it is already half flood on the land, and the water flowen halfe wayes, ſoo that men may goe into all the Havens on the Flemiſh coaſt with 5 or 6 foot water.

In the middeſt through the Heades, the flood falleth n. e. & by eaſt, & the ebbe ſouthweſt & by weſt.

Fro. Dover to the n. Forland, the tyde falleth through within the Goodding n. & ſ. over the Brakes & Quernes.

Before Callice and Blackneſſe, the flood falleth firſt one quarter to the land, afterwards n. n. e.

Of the Depths.

In the right fare-way betwixt the Marſdeep & the Heades it is 23 & 24 fathom deepe. A little without the Flemiſh banckes 18. 19. & 20 fathom, but neere Goodding, or about the north Forland, it is 26. 28. and alſo 30 fathom deep, the neerer Goodding the deeper water.

Being thwart of Goodding in 28 or 29 fathom, you ſhall not be 2 ſhots of a caſt-peece from it.

For to ſayl out of the Marſdeep towards the Head, go not on otherwiſe then ſouthweſt, & ſouthw. and by ſouth, (but you muſt be very carefull to take heed of the tydes) when you ſhall reckon to have ſayled 40 or 46 leagues, then edge over to the Flemiſh banckes, untill you come in 20 or 18 fathom, when that you are ſure of theſe grounds, then goe on ſouthweſt, & at length ſouthweſt, & by weſt, & you ſhal come in the midſt betwixt the Heads of Callice & Dover.

Flanders you may ſee from the Poope in 16 fathom, and then you are within the poynt of the Flemiſh banckes.

Callice cliffe & the ſouth Forland, or the poynt of Dover you may ſee when you are before them in 24 fathom.

Courſes and Diſtances.

From Blanckenbrough to Oſtend ſ. w. & by w.	2 leagues
From Ooſtend to Newport w. ſ. w.	3 leagues.
From Newport to Dunkerck w. ſ. w.	5 leagues.
From Dunkerck to Graveling w. ſ. w.	5 leagues.
From Graveling to Callice w. ſ. w.	4 leagues.
From Callice to Callice-cliffe ſ. w. & by weſt	1 league.
From the Heades of Callice and Dover to the Iutland northnortheaſt	Riffe of 120 leagues.
From Callice-Cliffe to the Naze in Norway, north north eaſt, ſomewat northerly	143 leagues.

Heights.

The Heads and Dover lye in 51 degr. 12 min.

How theſe Lands doe ſhew themſelves at Sea.



Thus ſheweth the coaſt of Flanders betwixt Oſtend and Newpoort.



Thus ſheweth Dover when you ſayle to the weſtwards of the Vaen, or Vrow-ſand, through the Heades.



When you run from the Downes towards the north Forland, then the land ſheweth it ſelf thus.



Thus ſheweth the coaſt of Flanders, betwixt Newport and Callice, when you ſayle alongſt by it.

The

Pascaart vant CANAAL

Begrypende in sich Engelandt, Schotlandt, en Ierlandt, als mede een gedeelt van Francryck.

Sørlinges

Walles

Devonia

Dorchester.

Southampton.

Sussex.

Kent

Normandie

Bretaigne

ENGEL

VRL

55 56 57 58 59

Stuxe van Bralhaven

I. Raplenehorne

I. Arran

Stuxe

Kilda

Balmesse I.

I. Torre

Schrapshaven

Long Stilly haven

Dunagal

Dery

Longford haven

Mangillions P.

Bandhaven

Towns

Castel

Skeras portruss

Kiockens

Portbellatrie

Schanse I.

Faire Forland

Schorehoek

I. Rapplens

Kaocfotgus

Ornaza

Ions I.

Colonza

Mull

Mey

Suney

Coplands I.

Longram

Commar I.

Kilmon

Crayfort

Kirckenbrick

Glasque

Ayr

Edenborg

Sobway

Annay

I. Henkies

Castel

Nicastel

t'Schrilligh erf

de Schaffen

Derrey

Cumay

Rum

Skye

Flalda

S. Nicolas

Allerick

Rona

Ellan Ronan

I. Kenda

C. Wrath

Colme

Kylland

Torfhuby

Ra

Hoborneheat

Orcades

Lnuernet

Norne

Banfe

Aberdin

Barra Major

S. Kilder

Lewis

Nary

I. Schent

Duytsche mylen 15 in een graat

Spansche mylen 17½ in een graat

Engel. een Fran. mylen 20 in een graat

36

VRANCRY

E N G E L A

Hable

Fecam

Dieppe

Warrigle

S:Valery en Caux

Yeu

Treport

Criel

S:Valery

Coiou

Somme flu:

Croton

Oostduyn

Amy flu:

Monstreul

S Josse

Canche flu

Estaples

Boloigne Beinen

Tour d'ordre Oudeman

Inbland

Swartents

Prouwesant

Smack

Romney

Canker-cast

Fuerley

Winckelsey

Camberbet

Rye

Beveſier

D. Sora Clova

Cuckmer haven

Nieuwer haven

Bramber

Doveren

Doveren Duyns

Sandwicht

'Duytſche mylen 15 in een Graadt

Spaaſche mylen 17½ in een Graadt

Engelſ. en Franſ. mylen 20 in een Graadt

De Zee Custen van VRANCRYCK tusschen Swartenes, en C. de la Hague Als mede de Custen van ENGELANDT tusschen 'Doveren, en Poortlandt.

C K

Caen
Fosse stu
Baieux
Estrechan
Roche
Hoofden
Roche van Tocket
Tocket
Dessine
Retiers
Loves stu
Quareme
Markol
I. de S. Marcus
la Honge
C. de Barfleur
C. de Wrek
Chirbourgh
Fos Sede Roberville
C. de Vorha
C. de la Hague
't Ras van Blanckert
Ornay
Ornay
Poortlandt
't Ras van Poortlandt
Wolfers horn
Swanedge
De Nadden
S. Helene
Eylandt Wicht
Neuport
Newton
Hurst caft
Peveril point
Sandwich Bay
Hogaft Point
Sandwich Southlandt
S. Andries Landt
Slot
Slot
Wimburgh
Selsey
Arundel
Chechester
Portmouth
Hampton
Pole

The ſecond part of the New LIGHTNING COLUMNE,

THE SECOND BOOKE,

Of the

WESTERNE NAVIGATION

Containing

The deſcription of the Sea-Coaſts of France, from Blackeneſſe to Uſhand, and the Coaſts of England from Dover weſtwards, to the Lands end the Channel of Briſtow, with all the Sea-Coaſts of Ireland.

The firſt demonſtration,

Where in

Are ſet fourth the Coaſts of France, from Blackneſſe to the Iſland Aldernay or Ornay, & from Dover to Beachy.

Blackneſſe.

ABout a great league to the weſtwards of Callice cliffe lyeth Blackeneſſe, a fowle outpoynt, thwart of it lye many rocks alongſt the ſhoare. From Blackneſſe to the River of Bullen, lyeth the coaſt ſouth and by eaſt three leagues, a league to the ſouthwards of the Neſſe, the land falleth ſomewhat in with a faire ſandy Baye. In this Baye lyeth a Fiſher village on the coaſt, thwart of it in the ſandy Baye is a very good roade for eaſterly windes, in 5. 6. 10. 15. and 16. fathom, according as you will lye farre from the ſhoare. For to anchor there, you muſt bring the ſteeple of the village over the middeſt of the houſes. This place is called S. Johns roade. A little to the northwards of that foreſayd Fiſher village, ſtands a mill with ſome houſes, from thence to the northwards you may not anchor, for there the ground is fowle and ſtony. To the ſouthwards of the Roade towards the River of Bullen, lye alſoo ſome little rockes alongſt the coaſt which you muſt not come very neere to.

S. Johns roade.

Upon the north poynt of the River of Bullen ſtandeth a high thick Tower, called the Tour d'Ordre, by ſea men the Old-man, a ſpeciall mark for to know the River by. About an Engliſh mile to the northwards of this Tower, a little mile from the ſhoare, lyeth a little ſuncken rock under water where a Huye or Smack may not goe over.

Tour d'Ordre. Oldman.

Suncken rock.

Upon the ſouth poynt of the River of Bullen ſtandeth a ſtone wall, and upon it a great Beakon of a maſt, thwart of it from the ſouth poynt lyeth off a little riſſe or ſhoale, that you muſt ſhun, and run cloſe alongſt by the Head, which lyeth at the north poynt, and hath been there lately made. When you are come within this Head, you muſt preſently let fall your anchor and ride there; It is a tyde-haven, there you muſt goe in at high water, and at low water lye drye upon the chindle. Without, before the River, lyeth a banck, men were wont from the ſouthwards to run in over in two fathom and from the northwards in three fathom, but it is now to the ſouthwards deeper, through the ſcouring of the water alongſt the foreſayd Head which is made at the north poynt.

Bullen.

From the Oldman, or the River of Bullen to Somme is the courſe ſouth about eleven leagues, between them lye alſoo two other rivers, Cauche & Auty, upon the firſt lye Eaſtaples and Monſtreu, there you muſt goe in a middle channell at the heigheſt water, within, it falleth altogether drye at low water.

The Somme.

Men may ſayle into the Somme, through two channells, from the eaſt poynt called the Eaſt Downe, lyeth off a ſand thwart before the channell; to the weſtwards off that riffe lyeth alſoo another great banck, between them goeth in the Eaſter-channell. For to ſayle in there, bring S. Valery a cables length to the weſtwards of the weſt point of the River, called the Oordell, & run in there upon, untill you come to the land at that foreſayd weſt poynt; and from thence cloſe alongſt by it, or as ſoon as you get againe deeper water over the banck, then turne up eaſtward towards the beacons. From the poynt of the Oordell lyeth of to the northwards a little riffe, upon the end of it lyeth a buy which you muſt leave on the ſtarboard ſide, and run in cloſe about to the northwards of it. From the point of the Oordell upwards, it is ſet alongſt with beacons, you muſt run alongſt cloſe by them, untill you come within the point of S. Valery, where you muſt anchor, and lye every tyde dry. The ſands there within do ſhift ſo often, that they are no to be deſcribed for alwayes.

For to ſayle into the Somme.

For to ſayle into the weſtern-channell, comming from the eaſt or the north, you muſt run alongſt by the banks in ſix or ſeven fathom, and not neerer, they are ſo ſteepe, that a ſhipp ſitting faſt upon them with the fore caſtle, at the ſtern hath three fathom. Comming towards the land at the end of the bankes, you ſhall finde a buy. Or els if you come from the weſt, and bring Crotoye a cables length within the Oordell, and ſayle ſoo right in, you ſhall finde the foreſayd outermoſt buy. Beſides this, there lye three other buyes, whereof that foreſayd buye on the poynt of the Oordell is the fourth, & the innermoſt: You muſt leave them all on the ſtarboard ſide towards the land, and run in alongſt by them to the northwards of them.

For to ſayle into the weſter channell.

Theſe channels and ſands there within (all untill paſt S. Valery) fall at low water altogether drye, the buyes alſoo fall drye, that men may goe by them, at halfe flood with an ordinary tyde there is no more then two fathom Water, it is not good to goe in there before that two third parts of the Flood bee ſpent. With an

ordinary tyde it floweth there five and ſixe fathom, but with a ſpring-tyde ſeven fathom up and downe. At high water and ſpring-tyde, a man may goe over all the bankes and ſands with eight or ten foot Water, five leagues upwards lyeth Abbeville.

Thwart of the Somme, it is farre off in to the ſea ſhoale water, five, ſixe, ſeven, eight, nine and ten fathom, three or foure leagues off into ſea: He that commeth from the weſt, and findeth himſelfe in darke and miſty weather to bee in ſuch ſhoaling, may bee wel aſſured, not to bee farre from the Somme.

From the Oldman to Diep, the courſe is ſouthſouthweſt 18 leagues, but from the Somme to Diep ſouthweſt and by weſt eight or nine leagues. About halfe way betweene the Somme and Diep, lyeth the River of Heu, within it on the north ſide lyeth Treſport, being alſoo a tyde-haven, where men muſt goe in at high water, and at low water lye dry.

Treſport.

Diep. At the eaſt ſide of the Haven of Diep, lyeth a ranck of rocks, and from it lyeth a little riffe of chindle towards the north, or the weſt; to the ſouthwards of this riffe goeth in the channell, about ſoutheaſt in, it is very narrow, and a ſhort inlet, therein lye three buyes in the middeſt of the deepe, not above a ſtones caſt one from the other, men may run in on both ſides of them; comming to the end of the buyes, they muſt keepe the middle of the channell, and run in betweene the heades, untill they come within the towne, & there make faſt with a cable on the ſhoare. Men may not ſayle in there before flood, but not at halfe ebbe; at low water it falleth altogether dry, but within at the Towne men may ride a float, at high water there commeth three fathom, or at the higheſt not more then 3 fathom and a halfe water, there come out alwayes Pilots to bring ſhips in.

S. Valery, in Caux. From Diep to Saint Valery in Caux, it is ſouthweſt and by weſt foure leagues, that is alſoo a tyde-haven, where you muſt goe in with high water, it is a narrow channell, where you goe in between to the Heads, there is neither ſand nor bancke before it that can hurt you, being come in, you may let your anchor fall, and make you faſt with a cable on the ſhoare. Hee that hath neither cable not anchor, may (being come there within) ſaile his ſhip on againſt the ſhoare in the chindle, and ſoo ſave his ſhip & goods without dammage.

Fecam. From S. Valery to Fecam it is w. ſ. w. foure leagues; that is a deepe tyde-haven, there remaineth at low water little leſſe then 2 fathom water. At the eaſt ſide of the havens-mouth lyeth a banke or plate, men may with ſmall ſhippes ſayle in through betwixt it and the land, and ſo runne in, ſounding, borrowing it eight or nine foot alongſt by the eaſt ſhoare, which is flat. For to ſayle into the weſtwards of the plate, you muſt keepe the Tower of Fecam, without the land, or without the Weſt poynt of the Haven, and then it ſhall bee ſouthſoutheaſt from you, run then upon that mark into the Haven, and then the foreſayd ſand ſhall remaine on the larboard ſide of you, and at halfe flood you ſhall have in the Havens-mouth 2 fathom water, being come in before the towne, you may anchor there by the Weſterne ſhoare in three fathom.

Struyſaert. From Fecam to Struyſaert it is weſtſouthweſt three little leagues. Without the poynt of Struyſaert lye two high ſharp rocks. From thence to Seynhead it is ſ. and ſ. and by weſt, 2 leagues and a halfe.

About northweſt from Seynhead lyeth a bancke, upon which at low water remaineth no more then two fathom and a halfe water: when the towne of New-haven commeth without Seynhead, then are you thwart of the back: For to avoyd it, run in cloſe aboard the Seynhead, alongſt untill you come within the firſt mill, there let fall your anchor in 6 fathom, & ſtay for a Pilot to bring you into the haven.

For to ſail into the River of Roan. For to ſayle into the River of Roan, comming from the north or the eaſt, you muſt runne cloſe aboard the land to the northwards of Seynhead, and alongſt by it, ſoo long untill the ſouth ſide of the river come unto the poynt of Seynhead, then runne in with it, untill the land to the weſtwards of Newhaven come without Newhaven, ſayle then unto the Haven of Newhaven. Or elſe, if you will goe without about the bancke or the Rettires, then edge over to the weſtwards ſoo far from the land untill the river come open, ſayle then towards the poynt of Tochet, and run in upon your lead by it, there is at high water three fathom and at low water no more then one fathom. The Rettires is a ſtony bancke, lying in the middeſt of the River of Seine, lying over towards the poynt of Honfleur, at low water it falleth at ſome places dry, at halfe flood it is to the ſouthwards three fathom, but to the northwards 2 fathom deep. When the land of Caen is without the poynt of Seynhead, and you ſayle then with it, ſouth on, then you runne to the weſtwards of it, or alongſt without it. Or elſe, if you keepe Struyſaert a handſpikes length without the poynt of Seynhead, then you runne alſoo without it. When the eaſter gate of New-haven commeth over the eaſter head, and the eaſter mill, ſayle then ſo on, keeping them ſo, then you runne in right to the northwards of the Rettires, and alſoo you can take no hurt of the banck that lyeth towards Seynhead. At Habell or New-Haven men muſt goe in at a high water, and within lye everie tyde dry.

The river of Seine muſt be ſayled into upon the tide, when the moſt, or the ſtrongeſt of the flood is ſpent, then you may ſayle alongſt by the land upon your lead, untill you may ſee in open into the river of New-haven, when then the ſouther Caſtle commeth over the eaſterhead, and the mill; run then right in upon it, but it is beſt to anchor halfe wayes betwixt the Caſtle and Seynhead, and there to ſtay for a Pilot: If there come none off, then ſayle from thence right with the Caſtle that ſtandeth upon the head, there it is deepeſt water.

To ſayle from New-haven upwards towards Roan, is not well to be done without a Pilot, you muſt goe with the tyde through the firſt travaille or banckes, which lie from New-haven to Honfleur ſ. eaſt, alongſt by the ſouther-land, and from thence alongſt the north ſide of the River to Quillebeuf, being come there, you are through the firſt travaille. You muſt alſoo bee well adviſed, and take good heed for the ſtrong ſpring by the Normans, called La Barre, which everie tyde commeth on ſoo ſtrong with the flood, that anchors and Cables have enough to doe to hold a ſhip: For that and other dangers more, it is not good nor convenient to ſayle up the River without a Pilot.

Tochet. Two great leagues to the ſouthwards of the River of Roan, lyeth a Tyde-haven, called Tochet, on the weſt-ſide of the entry ſtandeth a beacon, by it you muſt goe in, or you may ſound it in by the Eaſter ſhoare. Southweſt, or ſouthweſt and by ſouth from the poynt of Seynhead, about ſix or ſeven leagues off, lye many banckes, a good wayes in ſea, you may ſayle on both ſides of them (as well to the eaſtwards as to the weſtwards) into the Foſſe of Caen, which lyeth in moſt ſouth, and lyeth in a Baye. At the weſt ſide lyeth a chindle, where men may ride within it, it is wyde and broade, and ſandy ſtrand, the Eaſt land is ſandhills, and farre flat in ſixe & ſeven fathom, there men may goe in, ſounding with the ſounding Pole.

Foſſe of Caen.

Cape Schierborough. From Seynhead to Cape de Barfleur, or Cape de Schierborough, the courſe is Weſt and by north nineteene leagues. About foure leagues to the eaſtwards of it lye the Iſlands of Saint Marques, men may ſayle round about them, but it is not there very cleane.

S. Marcus La Honge. A league to the weſtwards of the Iſland of Saint Marcus lyeth La Honge a flat Tower, to the weſtwards of it lyeth the poynt of Barfleur, betwixt both is a great baye, where men may lye in ſix or ſeven fathom landlockt for a n. n. weſt winde. A northeaſt winde bloweth there open in.

From

From the north-poynt or C. de Barfleur (which lyeth northnorthweſt from you, when you lye in the road) lieth off a banck or little riffe, yet a ſhippe may go over it. Northeaſt a league and a half off from the foreſayd poynt lyeth a rock under water, where ſhippes may not goe over.

From C. de Barfleur to Schierborough it is northweſt and by weſt foure leagues, that is a little Tyde-haven. To the weſtwards of the poynt of Barfleur lye ſome foule grounds, if you keepe the high land of Schierborough without the Cape de Wyck, you ſhall not come too neare them.

Before Cape de Wyck is a good roade in ſix fathom, a little to the eaſt-wards of the two high rockes in a ſand-bay.

Before Schierborough lye ſome rockes, or little Iſlands, which are cleane round about, to the weſtwards of it lyeth a Tyde-haven, called the Foſſe of Moberille, before it on both ſides lye 4 or 5 high rocks, at high water men runne through betwixt them, and ſoo into the Haven. A great league and a halfe to the weſtwards off it, lyeth Cape de Hague.

Two leagues weſt and by north from Cape de Hague lyeth the Iſland Aldernay or Ornay, betwixt them goeth the Race of Blanckert through.

The Coaſt of England.

The poynt of Dongie Neſſe lyeth from Dover ſouthweſt and by weſt diſtant 8 leagues. At the eaſt ſide of the Neſſe in Romans Bay, thwart of the Romans-Tower, is a good roade for weſt & ſ. weſt windes: For to anchor there, runne ſo farre in the Bay, that the poynt of the Neſſe be ſouth and ſouth and by weſt from you, anchor there in about 7 or 8 fathom; you may alſoo anchor on the weſt ſide of the Neſſe, for a northeaſt winde, ſoo that the poynt lye eaſt and by north from you.

For to ſayle in to the Camber of Rye, comming from the weſt, you muſt keep Beachy without the poynt of Fairlee, and run ſoo towards the Neſſe, and being come in faire by it, run in without two Cables length alongſt by it, unto the end of the Neſſe, then edge up to the weſtwards, and leave the beakons upon the ſtarboard ſide, untill you come before the Caſtle Camber, that ſtandeth upon the ſouther chindle, there you may anchor in foure and five fathom: From thence alongſt even unto the Town of Rye, it is all ſet with beacons, which ſtand alongſt by the eaſt ſide of the Deep, unto the Daries, which at low water fall dry. In ſayling unto Rye you muſt leave all the beacons unto the ſtarboard ſide, and run indifferent cloſe alongſt by them.

The poynt of the Neſſe and Beachy lye weſt ſouth weſt, and eaſtnortheaſt diſtant 7 leagues. Beachy is by the ſeven white Cleeves, the beſt knowne land that a man can ſee any where. To the eaſtwards of Beachy men may anchor for weſterly windes in ſixe or ſeven fathom, ſoo that the poynt be ſouth, and ſouth and by weſt from you.

Of the Tydes and Courſes of the Streames.

Before Callice and Blackneſſe, the flood falleth firſt one quarter to the land afterwards n. n. e.

Betwixt Blackneſſe and Bulleyn, the flood falleth n. and by eaſt by the land, but a ſeaboard in the offing northeaſt. A ſouth and ſoutheaſt moone maketh there the higheſt water.

Betwixt Bulleyn, Diep, and before the Somme, the flood falleth firſt one quarter to the land; afterwards northeaſt and by eaſt, and the ebbe ſouthweſt and by weſt.

Betwixt Diep and Struyſaert without the land in the Fareway, the flood falleth northeaſt and by eaſt, and the ebb ſouthweſt and by weſt.

At New-haven, and in the River of Roan a ſoutheaſt Moone maketh a high water.

From Struyſaert to Caen in the Foſſe, the flood falleth ſouthſouthweſt, and the ebb northnortheaſt.

Before the Haven of Caen a ſouthſoutheaſt maketh high Water, within the Haven a ſouth and by eaſt moone.

At Marckell, la Honge, Barfleur, Sherborough, and C. de Hague by the ſhoare, a ſouth & by eaſt Moone.

From Seynhead to Barfleur, the flood falleth by the land eaſt and by north, and the ebbe weſt and by ſouth. But in the channell a ſeaboarde the land, the flood falleth away eaſtnortheaſt, and the ebbe weſt ſouthweſt.

At Cape de Hague by the ſhoare, a ſouth and by e. Moone maketh high water.

In the Race off Blanckert a north and by eaſt, and ſouth and by weſt Moone. The flood falleth through the Race northeaſt, and the ebbe ſouthweſt.

In the middeſt betwixt the heads a ſouthweſt Moone.

At Dover a ſouth and north Moone.

Betwixt Dover & Dongie Neſſe, and likewiſe thwart of the Neſſe, a ſ. ſ. w. Moone maketh full ſea.

In the Channell of Winchelſea, a ſouth and by eaſt Moone.

At Beachy by the ſhoare, a ſ. ſ. e. & n. n. w. Moone.

In the Fareway thwart of it, a ſouth & north Moone.

From Dongie Neſſe to Dover, the flood falleth n.e. & by eaſt, & the ebbe ſ. w. & by weſt.

From Beachy to the Neſſe, e. n. e. and w. ſ. w.

At Beachy by the ſhoare before the ſeven Cleves, the flood falleth eaſt & by ſouth, and the ebbe w. and by n.

Of the Depths.

Callice cliffe & the ſouth Forland, or the poynt of Dover, you may ſee when you are before them in 24 fathom.

To the ſouthwards of the Oldman, or Tour d'Ordre, lyeth the high land of Eaſtaples, which is very good to bee knowen, becauſe thereabouts is no land ſoo high. When that is n. n. e. from you; and you be thwart of the Somme, it is there deepe 8 and 9 fathom.

Upon the land of Somme towards Diep, ſtand many ſharp towers, & ſome milles & trees, and hath all alongſt the coaſt a ſandy ſtrand.

Before Diep, men may ſee the land in twenty & two and twenty fathom.

About foure leagues without Struyſaert it is deep 20 fathom.

Between Diep & Seynhead ſtand alſoo many ſharpe towers, trees & houſes upon the land. Struyſaert is beſt to be knowne on a great rock like a high Tower, thwart of it in the fareway it is deepe 16 and 17 fathom.

About C. de Barfleur and Sherborough foure leagues from the Iſland, it is deepe thirty fathom.

Barfleur is a high poynt, below upon the white land ſtandeth a flat Tower, two milles, and ſome little houſes, and to the weſtwards of it is more white land.

Upon Cape de Hague ſtandeth a Caſtle, with a little turret; a little to the eaſtwards of it in the land ſtandeth a ſharp Tower. Two leagues to the eaſtwards off it lyeth Sherborough with a flat ſteeple.

Betwixt Winchelſea & Picardy in the middeſt of the Channell it is deepe 26 and 27 fathom, upon ſuch depth men may ſee Fayerley and the land of Dover.

Without Beachy thwart of the ſeven Cleeves it is deepe 28 and 30 fathom.

Courſes & Diſtances.

From Callice-cliffe to Blackneſſe ſ. w.	one great league.
From Blackneſſe to the Oldman, ſouth	2 leagues.
From Blackneſſe to Somme ſouth	14 leagues.
From the Oldman to the Somme ſouth	11 leagues.
From the Somme to Treſport w. ſ. w.	7 leagues.
From the Oldman tot Deep ſ. ſ. weſt.	18 leagues.
From Treſport to Diep ſouthweſt and by w.	4 leagues.

From Diep to Fecam, w. ſ. w. 10 leagues.
From Fecam to Struyſaert ſ. w. and by w. 3 leagues.
From Struyſaert to Seynhead, the courſe is ſouthſouthweſt two great leagues.
From Seynhead to Caen in the Foſſe, the courſe is ſouthweſt and by ſouth 8 leagues.
From Seynhead to C. de Barfleur or Chierenburgh w. and by north 19 leagues.
From Blackneſſe to Diep ſouth and by weſt 22 leagues.
From Blackneſſe to Struyſaert, or C. de Caux, ſouthweſt & by ſouth 31 leagues.
From Blackneſſe to the Caskets, the courſe is weſtſouthweſt 54 leagues.
From Blackneſſe to Wight w. ſomewhat ſoutherly, 37 l.
From Blackneſſe to Beachy weſt 18 leagues.
From Diep to Wight, the courſe is w. n. w. 36 leagues.
From Diep to Beachy northweſt and by north 25 leagues.
From Diep to Dover north 27 leagues.
From Seynhead to Diervliet, or the poynt of Sherburg weſt and by north 19 leagues.
From Seynhead to Portland n. w. and by w. 38 leagues.

From Struyſaert, to the eaſt end of Wight, northweſt ſomewhat northerly. 29 leagues.
From Struyſaert to Beachy, north 26 leagues.
From Struyſaert to Fairlee, north & by eaſt, ſomewhat northerly 29 leagues.
From Struyſaert to the poynt of Dover, the courſe is n. northeaſt 35 leagues.
From Caen to Dierfliet, or the poynt of Barfleur northweſt 16 leagues.
From Dierfliet to Cape de Hague w. n. weſt 8 leagues.
From Dover to Dongie Neſſe ſ. w. and by weſt 8 leagues.
From the Neſſe to Fairlee w. ſ. w. 3 leagues.
From Dongie Neſſe to Beachy w. ſ. w. 7 leagues.
From Fairlee to Beachy ſ. w. and by w. 5 leagues.

Heights.

The Heads and Dover lye in 51 degr. 12 min.
The Somme lyeth in 50 degr. 6 min.
The Point of Struyſaert in 49 degr. 35 min.
Beachy lyeth in 50 degr. 50 min.

How theſe Lands doe ſhew themſelves at Sea.



From Callice-cliffe unto beyonde Bulleyn, the land ſheweth it ſelfe thus, when you ſayle alongſt by it.



Thus ſheweth the land betwixt Eaſtaples and the Somme, when the high land is northnortheaſt from you.



Thus ſheweth the land to the ſouthwards of the Somme, towards Diep.



Theſe two figures belong at the AA one to the other.



The land between Diep and Fecam ſheweth like theſe two figures here above, when you ſayle alongſt by it, two or three leagues without the land.



The forme of Stuyſaert, and Seynhead, when you ſayle alongſt by them.



Thus ſheweth the land or Caen, when you are foure leagues off from it.



Thus ſheweth the land of Sherborough, and the land to the weſtwards or it towards C. de Hague, when it is ſoutheaſt 4 leagues off from you.



Thus ſheweth Dover when you ſayle to the weſtwards of the Vaen, or Vrow-ſand, through the Heades.



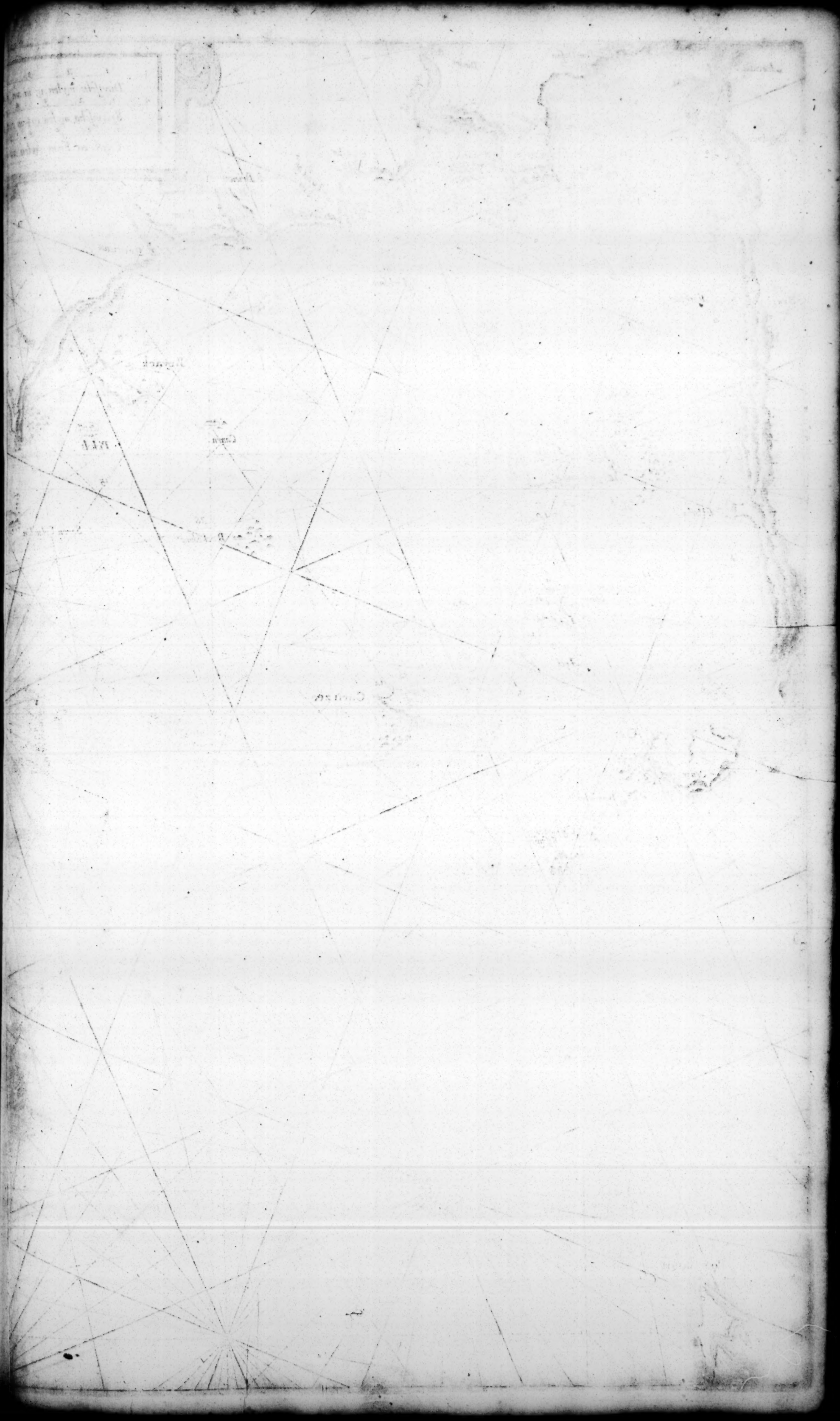
Thus ſheweth Fairlee, when you ſayle alongſt by it.



Thus ſheweth Fairlee when you come from the weſt.



Beachy ſheweth thus when you come from the weſt.



Aurentie
Pont-Orfum
Dinant
Dinant Pt.
Conqlence
Cancale
S. Malo
S. Sclodor
Cle Terde of Cde Tete
S. Brieux
Lafreye
Oyster Gat Meuslteen Sycamber
Granville
Bonit
Porterieux
De Sause
Oyster banck
Gauze
Mortefum
Baffin
Monke
Bryack
Eckeron
Buff
Camin
Pickels
Iarzee
Cde Verha
Pierelock
Peter noffers
Seven Eylanden
Rockesmue
Sarck
Arck
Arom
Blanckenze off Ornay
Cde Gruse
Garnzee
Garnzee
Ornay
Ras
Barroches
Caffuettes offe Kiefaffen
Poortlandt
Slot
Slot
Duytſche mylen 15 in een gra
Spaanſche mylen 17½ in een
Engel. en Fran. mylen 20

De Cuſten van BRETAIGNE, Waer in vertoont wort alle gelegentheyt tuſschen Caap de Hague ent' Eylant Heyſsant.

R E T A I. G N E.

Ile ſou.
Croden
Toukemeſen
Colongier
Kockens
Landernau
Breſt water
Bayen
Kimengan
S. Malos
Cloſter
Conquets
Conquets oort
Le Bot
Blanc bay
Pinics
Le Conquet
Heyſsant
Portland
Otrest
Porſal
S. Paul de leon
Plaigroud
Roſcou
Morlaix
Morlaix
S. Landy
Ogſter gat
Ogſter gat voor Roſcou
Le Taureau
Iſle bas
Roche blanche
30
50

38



The ſecond Demonſtration.

Where in

Is decyphered the Coaſt of Brittannie, from the Iſland of Ornay to the Iſland of Uſhant.

Cape de Hague.

TWo leagues weſt and by north from Cape de Hague, lyeth the Iſland Aldernay or Ornay, betwixt them goeth the Race of Blanckert through.

Ornay. The Race of Blanckert.

Aldernay or Ornay is about three leagues long, and lyeth eaſt & weſt. The eaſt end is cleane, men may ſayle reaſonable cloſe alongſt by it, but the weſt end is very foule: There lye ſome little Iſlands cloſe by the weſt end, being paſſed them, men may ſayle towards Iarſey without any feare.

To the ſouthwards of the foreſayd little Iſlands at the weſt end lyeth of a ledge of rockes within it, on the ſouthſide it is cleane, except at the ſouth poynt, that is alſoo foule. Hee that will anchor on the ſouth ſide of Ornay, muſt be mindfull thereof, & anchor a little to the eaſtwards of the Tydehaven.

From the weſt end of Ornay lyeth a great multitude of rockes weſt and by north, & weſtnorthweſt off three leagues into the ſea.

Upon the outtermoſt and weſtermoſt end, lyeth a great high rock with many other ſmaller rocks about it. Halfe wayes betwixt this great rocke and Ornay lyeth another great rock, but not ſoo high as the foreſayd weſtermoſt, from it lye off a multitude of rockes towards the outermoſt, which fall dry at low water, but at high water many lye under water. Theſe two great rockes are called by the French Les Caſquettes, and by the Dutch the Kiſkaſſen, and by the Engliſh the Caſkets. Cloſe by the weſt end of Ornay, towards the Caſkets, lye other two great ranes of rockes, called the Barroches.

Caskets.

Barroches.

From the eaſt point of Ornay to the eaſt end of Garneſey (about to the ſouthwards of Ornay) the courſe is weſtſouthweſt, 9 leagues; but from the Caskets to the weſt end of Garnſey ſouthweſt and by ſouth, 6 leagues.

Load under Garnſey.

If you will anchor under Garnſey (comming from the Caskets) then runne on to the northeaſt poynt of Garnſey, and ſo farr to the eaſtwards of it, untill you get ſight of the caſtle that ſtandeth upon the rock on the eaſt ſide of Garnſey. Or if you come about to the weſtwards of the Caskets, then goe on ſoutheaſt, or ſomewhat more ſoutherly, untill the northeaſt poynt of Garnſey be ſouth and by weſt from you, ſayle then towards it, till you ſhall come in ſight of that foreſayd caſtle upon the rocke. Bring that over the ſouth poynt of Garnſey, and ſayle in upon that marke, betwixt the Iſland Arem or Harm, and Garnſey, untill you come by the foreſayd Caſtle; betwixt theſe Iſlands it is on both ſides of rockes, where of you muſt take good heed, eſpecially on the larboard ſide towards Arem, when you are come by the caſtle, you may anchor within or without it, where you pleaſe, without the Caſtle in 12 or 13 fathom, or within the Caſtle (that is betwixt the Caſtle and Garnſey) in ſix or ſeven fathom at low water. It doth flow there ſix or ſeven fathom up and downe, which men muſt reckon upon.

Under the ſouth ſide of Garnſey men may ride for northweſt, north, and northeaſt windes. If you come from the weſt, or from the Caskets, you muſt runne cloſe about by the ſouthweſt poynt, called C. de Gruſe; and alongſt by the ſouth ſide of the Iſland; well halfe wayes the Iſland, and anchor there where you think good, in eighteene or nineteen fathom. If the wind ſhift to the ſouthweſt, or to the weſtſouthweſt, then you may runne about by the ſouth poynt unto the foreſayd Caſtle, and anchor there either without or within it, as here before is ſayd. From the aforeſayd ſouth poynt, lyeth off a little ledge of rocks, whereof ſome rocks lye above, & ſome under water, theſe you muſt avoyd when you ſayle about by it.

South & by weſt, and ſouthſouthweſt about eight leagues from Garnſey lyeth a great ledge of rockes, more then a league great, called Rockeduves.

Rockeduves.

About 2 leagues ſoutheaſt from Garnſey lyeth the Iſland Sarck, there men may anchor round about it in five and twenty, ſix and twenty, and ſeven and twenty fathom. From the north end lye of ſome Rocks, whereof ſome lye above, and ſome under water. At the ſouth end here of lye alſoo ſome rockes, but all above water.

Sarck.

Betwixt Garnſey and Sarck lye two other little Iſlands, Arck and Arem, or Harm, there men may ſayle through betwixt them.

Arck, and Arem.

The Iſland Iarſey from Garnſey ſoutheaſt diſtant 7 leagues, round about this Iſland are good roades at divers places. All alongſt the north ſide men may anchor in 10 & 11 fathom. At the ſame north ſide, ſomewhat within the weſt poynt, lye ſome great rockes, a good wayes of from the ſhoare, called the Pater noſters, or Pierreleg. At the ſouthweſt poynt lye many rockes which lye of a great wayes into the ſea, to the northwards of them, to wit, betwixt them and the weſtermoſt poynt, at the weſt ſide of Iarſey men may anchor at divers place in ten, eleven & twelve fathom. At the ſouth ſide of Iarſey is alſo a good road for a northweſt & w. n. w. Windes. At the eaſt ſide lyeth Saint Catherines baye, there is alſoo very good roade for weſterly windes.

Pater noſter.

S. Catherines Bay

The weſt end of Iarſey and Saint Maloes, or the Iſland Siſember before Saint Maloes lye ſouth and by eaſt, and north and by weſt, eight or nine leagues aſunder. About halfe way betwixt both right in the fareway, lye a great number of high rockes together, which containe in circuit in ſayling about, ſeven or eight leagues, called the Mankiers, they lye farre towards Iarſey, ſome above and many under water, ſoo that it is not without great danger to runne through betwixt Iarſey & the Mankiers.

Mankies Rockes.

When men will ſayle through the Race of Blanckaert, bound for S. Maloes, they run commonly through betwixt Sarck and Iarſey, may alſoo ſayle to the eaſtwards of all the Iſlands and ſhoals alongſt the coaſt of Normandy, towards S. Maloes in manner as followeth.

When men come a little paſt the C. Voorha, they ſhall meet (thwart of the Iſland Iarſey) with three or foure high rockes, called Le Beuf, men may runne to the weſtwards of them, and ſo through betwixt them and the Iſland Iarſey, or els to the eaſtwards of them alongſt by the mayn land, even as they will, towards the riffe of Mortefaim, that lyeth upon the coaſt of Normandy ſouthſouthweſt, 8 leagues from Cape de Voorha.

Le Beuf.

Over againſt, or thwart of the Riffe of Mortefaim, lyeth a rane of rockes lying eaſt and weſt more then a league in length, called Beufkin, at the eaſt end many of them lye above, & at the weſt end moſt of them lye under water. Men muſt ſayle through betwixt them and the riffe of Mortefaim that are bound for Granville.

Beufkin.

Betwixt the foreſayd rockes Beuf and Beufkin, lieth another great rane of rockes, called Eckerof, which lye of from the ſoutheaſt poynt of Iarſey towards Granville; you muſt leave all theſe rockes on the ſtarboard ſide, & run alongſt to the eaſtwards of them.

Eckerof.

From the riffe of Mortefaim to Granville, the courſe is ſouthſoutheaſt, and from Bufkin ſoutheaſt 4 leagues.

Granville. Cape de Voorha & Cranville are two poynts that lye without the other land. About the ſouth poynt of Granville lye two or three little rockes; along by them men muſt run in within a Pier or head, where the ſhips lye dry at low water. Betwixt cape de Hague, and Grandville men may ſee upon the land many little houſes, mills, & trees, as they ſayle alongſt by it. A little to the ſouthwards off the riffe Mortefaim ſtandes a Church with two ſteeples, called Quotanſe. All alongſt this whole coaſt is every where good anchorage in 6 or ſeven fathom, eſpecially a little to the ſouthwards of Cape de Hague.

La Shauſee. About two leagues weſt from the poynt of Granville lyeth another great rane of rockes two great leagues long, lying eaſt & weſt, called La Shauſee, betwixt them & the poynt of Granville men muſt ſayle through that are bound for Concalle or S. Maloes.

Mount de S. Michiel. About five leagues to the ſouthwards of Granville, in a great baye, lyeth an Iſland before the river of Avrantie about a league without the land, called Mount de S. Michiel, upon it lyeth a Caſtle, or little towne, called S. Michiel, with a high Tower which men may ſee at ſea. This Bay is to the ſouthwards of Granville, within the rocks of Concalle, very flat and riſing ground, from thirteene, tenne, eight, ſixe and foure fathom to one fathom, ſo that at low water the Bay falleth ſoo farre drye, that from the ſtrand men ſee no ſea nor water.

Concalle From Granville to the poynt of Concalle, the courſe is ſouthweſt 5 leagues, from that eaſtwards lye three rockes, under which men may anchor in ten fathom. For to ſayle to the towne men muſt run in betwixt the poynt & the foreſayd rockes. It is betwixt them both eight and nine fathom deepe. Before the towne it is ſhoaler water. To the northwards of the Towne lye other two rockes, there men may alſo anchor under in 5 and 6 fathom water.

From the outermoſt rockes by the poynt of Concalle untill you come before S. Maloes, the courſe is weſt, & weſt and by ſouth 5 leagues.

S. Maloes. Before the haven of S. Maloes, lyeth an Iſland, called Siſember, upon the weſt end thereof ſtandeth a mill, and upon the eaſt end a church with ſome little houſes being a Friery, comming out of the ſea, you can but even ſcarce ſee the Church, but being within the Iſland you may ſee it better, becauſe it ſtandeth on the ſouthſide of the Iſland.

Siſember.

Meuwſtone. A great ſhot of a caſt peece to the eaſtwards of Siſember lyeth a great high rock, called the Meuwſtone: betwixt them and Siſember it is all full of rockes and ſtones, which at high water lye moſt under water: there is a little channell betwixt them both, which the French-men uſe with their ſmal ſhipping, through betwixt the rockes, but is not to be uſed with great ſhipping, neither by them that are not very well acquainted with it.

La Congie. Betwixt the Meuwſtone, and ſome other rockes to the eaſtwards off it lyeth in a channell ſouth and ſouth and by eaſt, called la Congie. For to ſayle in there you muſt runne in cloſe aboard to the eaſtwards of the Meuwſtone, ſoutheaſt and by eaſt right in with the towne, untill you bee gotten in two third parts of the diſtance (betweene the Meuwſtone and the Towne) from the Meuwſtone, & are one third part of the diſtance from the Towne, that is when the Meuwſtone is twice ſo farre from you as the Town, then you ſhall ſee by the northweſt poynt of the Town two great rockes, about a caſt peece ſhot from the foreſaid poynt; upon each rock ſtandeth a little houſe, the outermoſt is the ſmalleſt, & is called the little Bee, the neereſt to the Towne is the greateſt, and is called the great Bee, ſaile then towards them, and run in about them within a cables length of them, but keepe that courſe ſo long, untill that the little Tower (that ſtandeth a little to the ſouthwards of the towne upon the poynt) come over the tower of Bore a little to the eaſtwards of Saledoor, keepe them one over the other, and ſayle ſoo in, unto the ſouth end of the town, where the mils doe ſtand, then you ſhall ſee there upon the rocks two beacons, run betwixt them through at high water, untill you come within the towne, at the eaſt ſide, the ſhippes lye moored with foure cables, dry at low water, two faſt on the towne, & two upon the ſand. Betwixt theſe two foreſayd beacons, to the ſouthwards of the town, and thereabouts, is the ground ſharpe, rockie and ſtonie, therefore men muſt take heed not to ſtay there at low water, or to ground there, but within on the eaſt ſide of the town it is cleane ſandie ground, there may the ſhippes lye a ground without danger.

The little and great Bee.

A little within, or to the ſouthwards of the foreſayd rock the little Bee, men may anchor in five or 6 fathom water at low water, ſo that the tower of Bore commeth little to the eaſtwards of the little Tower upon the poynt to the ſouthwards of the Town, that road is called by the French La Ranſe, there men commonly firſt anchor, and ſtay for high water, for to goe in about to the ſouthwards of the Towne. It floweth here at S. Maloes, & thereabouts, 7 fathom up and downe with an ordinary tyde. The Road La Ranſe.

From the weſt end of Siſember, lye off alſoo a great many rocks alongſt to the weſtwards, more then a great ſhot off a caſt peece, at the end of them goeth in the Weſter-channell of S. Maloes, eaſt and by north in. For to ſayle in there, you muſt look out for a ſharp little Tower, that lyeth ſomewhat to the northwards or to the eaſtwards of S. Maloes, within the land called Pellemy, when you have brought that eaſt and by north from you, then you ſhall ſee upon the ſhoare right againſt it, a great black rocke, which for Blackeneſſe ſheweth it ſelfe without all the other rockes thereabouts, and thereby is very eaſy to bee knowne: Bring that rocke & the foreſayd little Tower one to the other & ſaile ſoo right in untill you come thwart of the Iſland Siſember, or els that the little Tower (upon the poynt to the ſouthwards of the Towne) come to the Tower of Bore, to the eaſtwards of Saledoor, ſayle then towards the roade of La-Ranſe to the ſouthwards of the little Bee; or els if it be high water, you may run in upon the markes, and then in about to the ſouthwards of the Towne, as here before is ſayd.

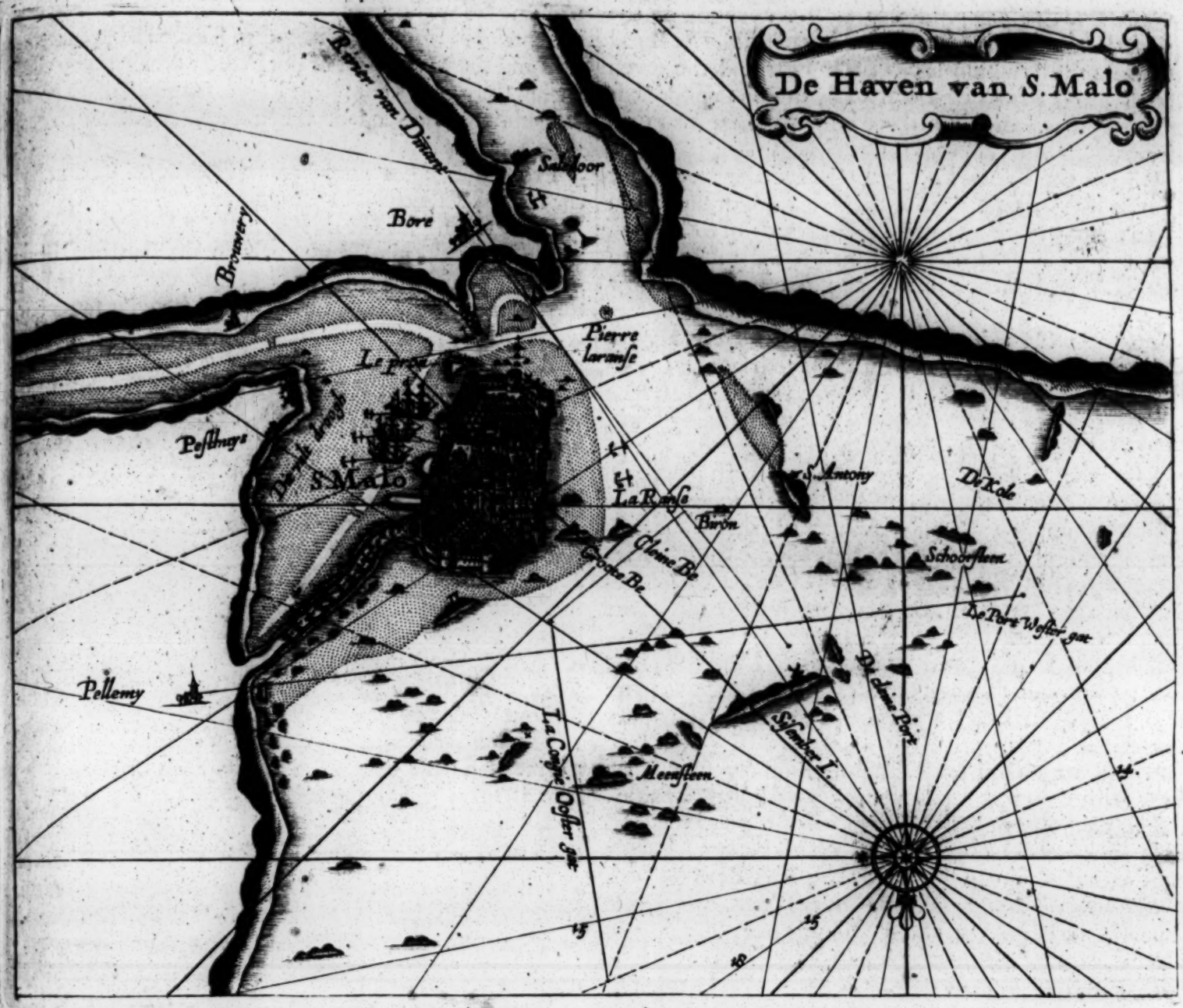
When you ſaile into this weſterne channel, you ſhal leave on the ſtarboard ſide a high rocke (called the Schoorſteen) with more other rockes to the weſtwards of it, which at high water are moſt of them over flowne. On the north ſide, that is on the larboard ſide, lye alſoo many rockes, whereof many of them are overflowne at high water, and alſo many remaine above water.

More, of Southerne channell. Yet a ſoutherne channell lyeth in by the land to the ſouthwards of the rock of S. Antony, upon marks that men may ſee a ſtearne the ſhip, but it is not uſed but with ſmall ſhips.

Stony banck. About halfe wayes betwixt the weſterne channell of S. Maloes, and C. de Farela, lyeth a ſtony banck under water. A little to the weſtwards of C. de Farela, lyeth a great rock. When you will ſayle from C. de Farela towards S. Maloes, and that you keepe the foreſayd rock right upon the poynt of Farela, you ſhall ſo (without faile) ſayle upon the Stone-banck: but if you keep the rock hidden under or behind the poynt, then you ſhall ſayle alongſt to the ſouthwards of it. Or elſe if you keep it without the poynt (ſoo that you may ſee through betwixt it & the point) then you ſhall ſayle alongſt to the northwards off it. The foreſayd rock is a good mark for to know Cape de Farela by.

S. MALO.

S. MALOES.



Foure leagues weſt from S. Maloes lyeth a great Sand-bay, where men may lye landlockt for all windes: Men uſe to anchor within a great rock, right againſt a mill and ſome trees.

About two leagues northweſt from that Sand-bay lieth the Cape de Farela, which is alſoo called Cape de Late, after the Caſtle de Late, that ſtandeth to the eaſtwardes of the poynt, there is a good Roade for weſt & ſouthweſt windes. Farela

Two great leagues northweſt from the entry of the Haven of S. Maloes, lyeth the Oyſterbanck, there under it men may anchor in 6 or 7 fathom. Oyſter-banck.

To the weſtwardes of Cape de Farela unto the north-end of the Iſland Briack, the courſe is weſt and by north nine or ten leagues. Two leagues from the land weſt from the Cape lyeth a great rane of rockes above water. Betweene the foreſayd Cape and the Iſland Briack lye the Havens or Rivers of S. Brieux and S. Benit. Briack. Brieux & S. Benit.

The Iſland Briack is two leagues long, & lyeth ſouth-ſouthweſt and northnortheaſt, when you kome from the eaſt, you ſhall ſee two mills upon it, and betwixt them a high round hill, with a little houſe upon it: you may ſail round about this Iſland, and may make roades on every ſide where you will, although round about it here and there lye ſome rocks, yet it is all over good anchor-ground. A good wayes off from the northeaſt point lyeth a rock, called Souffe, and at the north end lyeth a ledge of rockes under water, where of you muſt take heed.

A gread league weſtſouthweſt from Briack, three or foure leagues a ſeaboard the land, lye the out-rockes, called the Pickeles, men may ſayle round about them alſo, but to the eaſtwards of them towardes the main land, lye many ſuncken rockes.

Foure leagues to the weſtwards of Briack lyeth the Port Blanck upon a great river, called Lantrilliers, to the eaſtwards of this haven lye off many out-rockes. Port blank. Lantrilliers.

To the weſtwards of Port Blanck, lye the Sept Iſles, or ſeven Iſlands, lying from the Pickels diſtant five leagues eaſt and weſt. A league to the ſouthwardes of them lyeth the Green land, there you may ride round about it. Betweene the ſeven Iſlands you may not ſayle through, but to the ſouthwards of them, betwixt them and the Green Iſland goeth a broade channell through. From the eaſtermoſt Iſland lyeth off a fowle riffe to the ſouthwards, upon the outermoſt end of that riffe lyeth a rocke, as a good marke for to ſayle about the riffe. Northweſt from the weſt-end of the ſeven Iſlands, lyeth alſoo a ſuncken rock, which at low water may be ſeene. Men may alſoo ſayle alongſt by the coaſt from Port Blanck, within to the ſouthwardes of the Green Iſland, and come out againe into the ſea to the weſtwards: from thence northweſt off into the ſea, lye the Triacle Pots, theſe are great feare full out-rockes, which lye ſpred wyde and broade weſtſouthweſt from the ſeven Iſlands, and foure or five leagues a ſeaboard the land. Seven Iſles. Greene Iſland. Triacle Pots.

Betwixt the Triacle Pots and the ſeven Iſlands lyeth the River of Laminoe, to the weſtwardes of the Greene Iſland: For to ſayl in there, men muſt take good heed of the northeaſt poynt, which is fowle. R. Laminoe.

Thwart of the ſeven Iſlands, upon the maine land, ſtandeth a Church with a high ſteeple, called Our Lady of the Clearneſſe, thereby men may know them.

Thwart of the Triacle Pots ſtandeth alſoo a high Tower, thereby men may know when they are neere them, but it muſt be very cleare weather before men can well diſcerne it upon the land.

Hee

Hee that commeth by night or darke weather from the Fourne, or Uſhant, and is bound to Saint Maloes. let him not goe with a ſoutherly winde, to the eaſtwardes of eaſt-northeaſt, or northeaſt and by eaſt with a weſterly winde, ſo long untill hee hath the length of the Triacle Pots, thath they bee on his broad ſide. The flood falleth ſoutheaſt within the Triacle Pots and the ſeven Iſlands, and ſhould by night eaſily draw a ſhip towards them. By day, or when there is ſight, there is no ſuch danger.

Within the Triacle Pots lyeth the tyde haven of Saint John de Doy, two leagues to the weſtwards of the Green Iſland, and two leagues to the eaſtwards of Morlions, men may ſayle from thence through the rockes unto Morlions, and anchor in five and ſixe fathom at low water.

Morlions. To the weſtwards of the Triacle Pots lyeth a great rock, the eaſterne entry of Morlions lyeth from it ſouthweſt and by ſouth diſtant two leagues, but the weſterne entry lyeth from it weſtſouthweſt & weſt and by ſouth foure or five leagues, that goeth in by a great long ragged rock. This entry men may ſayle in ſouth, & ſouth Morlaix. and by weſt, unto the caſtle of Morlaix; being about the caſtle they may run through the rocks againe to the eaſtwards, and runne out againe at the eaſterne entry northnortheaſt, and north and by eaſt into ſea, according as the tyde ſhall be, the flood commeth there out of the northweſt.

If a man would goe from Morlaix to Morlions, hee may goe on eaſt through the rockes, and ſo ſayle to it: It is all broken land, and there remaineth at low water five fathom depth.

S. Paul de Lion. If you are bound to S. Paul de Lion, you muſt run right with the great rock, with the two horns or Sadle, and ſo cloſe alongſt by it: being paſt it, edge to the land upon the ſtrand lyeth a village, called Plempoll, ſayle right with it, & alongſt by it, to the eaſtwards of it goeth in the river. Theſe are all tyde-havens, but betwixt the rockes of the Morlions, and the Iſlands Bay, it is at lowe water deepe enough for to ſave a ſhip.

The land of S. Paul de Lion is double land; upon S. Pauls Church ſtand two ſharpe ſteeples. The Iſland Iſle de Bas, lyeth thwart before it, upon it ſtandeth two ſtakes, to ſee to a farre off like milles. Upon the eaſt end of that Iſland lieth a very high ragged rock, when you are to the eaſtwards of this rock, you ſhall ſee two ſharpe ſteeples a little one from the other, theſe are the ſteeples of Plempolle: you may alſo then ſee the Caſtle of Morlaix, lying ſoutheaſt from you, upon a high rock.

Iſle de Bas. The foreſayd outermoſt long ragged rocke of Morlaix, lyeth from the top of the Iſland Iſle de Bas, eaſt and eaſt and by ſouth three or foure leagues. Men may ſayle alongſt by the maine land within and through theſe rocks, untill they come to the ſeven Iſlands, they are all great bayes, where in moſt places is good anchor ground.

Five greate leagues north and by eaſt of Iſle Bas and ſouthweſt and by weſt 27 leagues, from the Caſkets, Roche Blanche lyeth a dangerous rocke or Cliffe called Roche Blanche, and lyeth from ſeaven Iſlands weſtnorthweſt 9 leagues.

Roskow. Within the Iſle de Bas lyeth the town of Roskow, you may ſayle into the haven of Roskow on both ſides of the Iſland.

For to ſayle into the eaſterne channell, when you are paſſed by the high rocke with the ſaddle, or two hornes called Le Taureau, and come by the land, betwixt the eaſt poynt of the Iſland, and the poynt of the maine land over againſt it, you muſt ſayle ſtill keeping the middle of the channell. It is in this channell 7 and eight fathom deepe. Being come within the poynt of the Iſland, you muſt runne in about by it, weſt & by ſouth, & weſt on, untill you come about halfe wayes within the Iſland, and anchor there in eight or nine fathom. And then Roskow ſhall lye ſouth and ſouth and by eaſt from you.

If you will ſayle into the weſterne channell, you ſhall ſee to the weſtwards of it, cloſe by the maine land two great long rockes. From the point of the maine land, a little to the eaſtwards of the eaſtermoſt long rocke, lyeth of a riffe from the land, which maketh the weſt ſide of the channell, you muſt runne in ſoutheaſt betwixt that riffe and the weſt poynt of the Iſland, & when you come within the poynt of the Iſland, you muſt edge up northeaſt unto the middeſt of the Iſland, & anchor there as here before is ſayd.

From Iſle de Bas alongſt to the Fourne or Uſhant lieth the coaſt weſtſouthweſt 16 leagues.

From the Iſland Iſle de Bas unto the Fourne, (the outermoſt or weſtermoſt end of the maine land of Britaigne) the courſe is weſtſouthweſt, and weſt and by ſouth thirteene leagues. About halfe wayes betwixt them both lyeth Obbevrack, or Abberwrack.

About a league northweſt without the rockes of Obbevracke or Abberwracke lyeth a rane of Rockes under water. They that by night wil ſayle or turne to windwards from the Fourne or towards the Fourn, let them not come thereabouts nearer the land then in 45 fathom. Abberwrack. The Fourn.

A league to the eaſtwards of the Fourne, & all alongſt the coaſt even unto the Fourne, lye many long black ragged Rockes, in many places appearing like Villages, theſe are called the Ovens, within them on the maine land (which is not very high) men ſhall ſee (ſayling alongſt by them) many white ſand-bayes, and here and there ſome little houſes, whereby the foreſayd land thereabout is very eaſy to be knowne.

The Fourne and Uſhant lye weſtſouthweſt & eaſtnortheaſt diſtant two great leagues. Uſhant ſheweth it ſelfe at ſea at the ſouth-end low, and at the north-end going up ſloaping, upon the midſt of it ſtandeth a little flat Tower, by which markes it is good to be knowne. Uſhant.

Of the Tydes and Courſes of the ſtreames.

At Cape de Hague by the ſhore, a ſouth and by e. moone maketh high water.

In the Race of Blanckert a north and by eaſt, & ſouth and by weſt moone. The flood falleth through the Race northeaſt, and the ebbe ſouthweſt.

In the Iſlands alſo a north and by eaſt, and ſouth and by weſt moone maketh a full ſea. Men cannot well reckon the tydes there: becauſe they have divers courſes about the Iſlands, but for the moſt part northeaſt & by north. A quarter of the tyde, the flood falleth thwart into the Caſkets.

In Garnſey a north and by eaſt, and ſouth & by weſt moon maketh full ſea.

At Concalle & Granville a weſtnorthweſt moone.

At S. Maloes an eaſt & weſt moone maketh high water.

The flood falleth in there at the weſterne channell, & goeth out againe at the eaſterne channell, men muſt reckon there upon when they will ſayle into theſe channels.

From the Iſland Briack in the bay of Benit, the flood falleth ſoutheaſt, but in the fareway eaſtſoutheaſt, and weſtnorthweſt.

At the eaſt-ſide of the Iſland Briack in the road ſouthſoutheaſt. An eaſt and weſt moon maketh there the higheſt water.

Betwixt the Iſland Briack and Garneſey, a weſtſouthweſt moone maketh full ſea, the flood runneth there eaſtſoutheaſt, and the ebbe weſtnorthweſt.

On the coaſt, & within the Caſkets, the tyde runneth continually againſt the Sunne, ſoo that it is there never ſtill water.

Betwixt Sept Iſles, or the ſeven Iſlands, and Garnſey in the fareway, a weſtſouthweſt moone maketh full ſea.

Betwixt Briack and the ſeven Iſlands, an eaſt and by north, and weſt and by ſouth moone maketh full ſea. The flood fulleth there eaſt and eaſt and by ſouth.

Betwixt

Betwixt the ſeven Iſlands and the outer rockes of Morlions, the flood falleth in ſoutheaſt within the Triacle Pots towards the Green-Iſland, but in the fareway in the offing, eaſt and eaſt and by north.

At Morlaix and S. Pauls a weſt and by ſouth Moon, maketh the higheſt water, but in the fareway in the offing thwart of it, a ſouthweſt and by weſt, and weſtſouthweſt Moone.

At the Iſle de Bas maketh high water a weſt and by ſouth Moone.

In the fareway there in the offing, the flood falleth e. n. e. and the ebbe w. ſ. w. and ſo likewiſe from thence all alongſt the coaſt of Bretaigne, unto the Fourne or Uſhant.

At Abberwrack an e. n. e. and w. ſ. w. moone maketh full ſea without Uſhant a weſtſouthweſt, and eaſtnortheaſt moone, and within the Trade a ſ. w. & by w. moone maketh full ſea.

Of the Depths about theſe places, and in what depths men may ſee the land.

Upon Cape de Hague ſtandeth a Caſtle, with a little turret; a little to the eaſtwards of it in the land ſtandeth a ſharp Tower. Two leagues to the eaſtwards off it lyeth Sherborough with a flat ſteeple.

The Iſland Ornay is upon the weſt end high with a ſteep going down poynt: The eaſt end is hilly, or with hommocks, but lower then the weſt end, in ſayling by it, men may ſee upon it a Tower or two with ſome mills. Upon the north ſide of the Iſland lyeth a white hill like a ſand hill.

To the northwards of the Caskets, two leagues from land it is deep 35 and 40 fathom.

Betwixt the Caskets and Garneſey it is 35 & 40 fathom deep, moſt all ſtony ground.

Northweſt about foure leagues from Garneſey is a pit where it is 80 or 90 fathom deepe, els it is there abouts 40 fathom deep.

Betwixt Ornay and Iarſey it is deep 20 and 25 fathom.

In the fareway of Iarſey, Rockduve and the Iſland Briack, it is deep 20 and 25 and 30 fathom.

About the Triacle Pots alongſt the coaſt it is 45 & 50 fathom deep, in ſuch depths men may ſee the land thereabouts. By night it is not good to come nearer that coaſt and the ſeven Iſlands, then in 45 fathom.

Thwart of S. Paul de Lion, and the Iſle of Bas, five leagues from the land it is deep 45 & 50 fathom.

Thwart of Abberwrack 5 leagues from the land, it is deep 50 and 55 fathom.

The Backovens, or the land of the Fourne, men may ſee in 50 fathom.

Uſhant being about ſouth from you, you may ſee in 50 fathom.

Courſes & Diſtances.

From C. de Hague to the outermoſt of the Caskets weſt & by north 9 leagues.
From the Caskets to Beachy n. e. & by e. 36 leagues.
From the Caskets to Wight n. e. and by n. 20 leagues.
From the Caskets to Portland north and by weſt 13 leagues.
From the Caskets to the Steart weſtnorthweſt 21 leagues.
From the Caskets to Silly weſt ſomewhat northerly 54 leagues.
From C. de Hague to C. de Voorha, ſouth & by eaſt 7 leagues.
From C. de Voorha to Granville ſ. ſ. e. 9 leagues.
From Granville to Mount Sint Michiel ſouthſoutheaſt 5 leagues.
From Granville to the poynt of Concalle, ſouthweſt 5 leagues.
From the poynt of Concalle to the eaſter channell of S. Maloes, weſt & weſt & by ſouth 5 leagues.
From the Iſland Siſember, before S. Maloes unto cape de Farrele weſt 4 or 3 leagues.
From C. de Farrele to the Iſland Briack weſt and by north 9 leagues.
From the Iſland Briack to the Pickelles w. & by ſ 2 leag.
From the Pickels to the ſeven Iſlands, weſtſouthweſt 5 leagues.
From the ſeven Iſlands to the Triacle Pots weſtſouthweſt 3 leagues.
From the Triacle Pots to the Iſle de Bas, weſtſouthweſt 9 leagues.
From Iſle de Bas to Uſhant weſtſouthweſt 16 leagues.
From C. de Hague to the weſt end of Jarſey betwixt Sarck & Jarſey through ſouthſouthweſt, and ſouthweſt and by ſouth 11 leagues.
From the Caskets to the weſtend of Garneſey ſouthweſt & by ſouth 5 or 6 leagues.
From Garneſey to Jarſey ſ. e. and by e. 7 leagues.
From Roche Blanche to Caskets northeaſt and by eaſt 27 leagues.
From Roche Blanche to Iſle de Bas, ſouth and by weſt 5 leagues.
From Garneſay to S. Maloes ſ. ſ. e. 16 leagues.
From the ſouth end of Iarſey to S. Maloes, ſouth and by eaſt 8 or 9 leagues.
From Garneſay to the rocks Rockduves, ſouthſouthweſt 8 or 9 leagues.
From Rockduwes to Manckiers eaſt and by ſouth, 9 or 10 leagues.
From Rockduwes to C. de Farella ſ. e. 10 leagues.
From Rockduves to the rock Camine ſouth and by weſt 4 leagues.
From Rockeduves to the Iſland Briack ſouth & by weſt and ſouth 6 leagues.
From Garneſey to the 7 Iſlands ſouthweſt 14 leagues.
From the Caskets to S. Paul de Lion ſouthweſt ſomewhat weſterly 30 leagues.
From the Caskets to the Fourne or Uſhant ſouthweſt and by weſt 46 leagues.
From the Caskets to the Lizard, weſt and by weſt and by north 39 leagues.
From Garneſey to the Lizard, weſt and by north 37 leagues.
From the ſeven Iſlands to the Lizard northweſt and by weſt 32 leagues.
From the ſeven Iſlands to the Steart north and by weſt weſterly 24 leagues.
From the ſeven Iſlands to Portland northnortheaſt 32 leagues.
From the ſeven Iſlands to Portland northnortheaſt 32 leagues.
From S. Paul de Lion to the Lizard northweſt and by north 28 leagues.
From Saint Paul de Lion to the Steart north and by eaſt 28 leagues.
From Saint Paul de Lion to Portland northeaſt and by north 39 leagues.
From Iſle de Bas to the Fourne w. ſ. w. 12 leagues.

Heights.

The Caskets lye in 49 degrees. 48 min.
The 7 Iſlands, or Sept Iſles in 49 degrees.
Uſhant lyeth in 48 degrees. 30 min.

How theſe Lands doe ſhew themſelves at Sea.



Thus ſheweth Ornay when you ſayle alongſt by it foure leagues from the land.



Thus ſheweth Ornay with the Caskets, when it is ſouth ſouth eaſt from you 3 or 4 leagues.



Thus ſheweth Ornay and the Caskets, when you ſayle alongſt by them, and Ornay is ſouth eaſt from you three or foure leagues.



Garnſey, being eaſt north eaſt from you ſheweth thus.



Thus ſheweth Garnſey when it is thwart from you about 4 leagues.

S. Paul de Lion. Obbevrack. La Four.



Thus ſheweth the land betwixt S. Paul de Lion and the Fourne, when you ſayle alongſt by it 4 leagues from the land.

The third Demonſtration.

Wherein

Are delineated the Coaſts of England, from Beachy to Port-land.

TO the Weſtwards of the poynt of Beachy, thwart of the weſt end of the 7 Cleeves, right againſt the Chindle, where men run alongſt by into New-Haven, men may alſoo anchor in 7. 8 or 9 fathom.

A league and a half to the eaſtwards of the point of Beachy, neareſt e. n. e. from the point lyeth a little ſand, upon which there is at low Water and ſpring-tydes ſcarce two fathom.

New-haven. At the weſt end of the ſeven Cleeves lyeth the River of Cuckmer-haven, or New-Haven, which hath two entries, the weſtermoſt entry lieth in by the weſt land, but is not to be uſed, but onely with very ſmall ſhipping, it falleth altogether dry, the eaſtermoſt is commonly the beſt, and lieth northweſt and by weſt in, there is at high water with a common tyde not more then ſeven, and with a ſpring-tyde 14 or 15 foot water; within, the ſhips lye every tyde dry: But before the village they remaine a ſloat, there they moore with foure cables faſt on 2 green ſhoares. Upon theſe entries men cannot well make any reekoning, they keep no certaine depth, when it bloweth a ſtorme out of the ſouth, they are oftentimes caſt too with a chindle, and opened againe with a freſhut.

Shorum. Shorum is a tyde-haven, where is at high water and ſpring-tydes 18 foote water, but at low water, there remaineth no more then 3 foot water, ſoo that then it floweth 15 foot up and down. With a common tyde at high water there is 12 foot and at low water 3 foot depth. The town Shorum lyeth a little Engliſh mile within the haven, ſhips (that draw but 8 or 9 foot water) can lie a float a little beneath the towne at low water, or elſe they lye dry every where.

When you come from the eaſtwards from Beachy or New-haven along by the ſhoare, you may ſee open into the Haven, before you come thwart of it: But comming from the weſtward, you ſhall not ſee it open before you come right before it, becauſe the weſt poynt lyeth ſomewhat further out then the eaſt poynt. From the weſt poynt runneth off a little tayle, but at high water you may runne in alongſt over it, ot herwiſe you muſt runne in by the eaſt ſhoare. Upon the eaſt poynt ſtand 2 beacons, which you muſt bring one in the other, & run in ſo right with them untill you come by the n. ſhoare, & then in alongſt by the foreſayd north ſhoare.

At Shorum ſomtimes there are builded many great ſhips of 3 or 400 tunnes.

Arundell. About ſixe leagues to the weſtwards of New-haven lieth Arundell, a tyde-haven, where a ſhip may go in at half flood, you muſt goe in thereby the weſt land north eaſt in. In the entry it is two, and betwixt the two lands 3 fathom deep at high water: But within the Haven remaineth at low water 4 and 5 fathom: There you muſt anchor before the village.

Owers. Five leagues w. ſ. w. from Arundell, and 13 leagues weſt and by ſouth ſomewhat weſterly from Beachy, lye the bancks or ſhoals of the Owers under water, a great league and a halfe a ſeaboard the land.

Eaſtborough-head. About 2 leagues e. n. e. ſomewhat eaſterly from the ſouth ſide of the Owers, and two little leagues ſouth from Arundell lyeth a ſhoale of rocks and chindles, called Eaſtborough-head, as great as an aker of land, which falleth (at low water and ſpring-tyde) dry, otherwiſe it commeth not above water, cloſe to it, it is 15 fathom deep. They that ſayle off from the haven of Shorum, and are bound to the weſtwards, muſt not go more weſterly then ſ. ſ. w. untill they come in 18 fathom, before they ſet their courſe more weſterly, for feare of this ſhoale. About an Engliſh mile n. w. from this foreſayd ſhoale, lyeth alſoo a ſunken rock, whereupon at low water it is no more then 5 or 6 foot water.

About halfe wayes, betwixt Arundell and Selſey, runneth of a ledge of Rocks thwart to the ſouthwards from the ſhoare, about an Engliſh mile and a halfe into the ſea, called the Bogners, whereof ſome of the rocks fall dry at low water, but the outermoſt are alwaies under water.

The Owers. The ſhoals or banks of the Owers, lye about 4 leagues to the eaſtwards of Wight, and lye of a league and a halfe from the land, thwart of them ſtandeth a tower in the land, when that is northnorthweſt from you, then are you thwart of the ſouthermoſt part of the ſhoale; And if you keep the Culver-cliffe of Wight weſt and by north, and weſt northweſt from you, comming either from the eaſt or from the weſt, you can take no hurt of the Owers, you may run alongſt by them in twelve fathom upon your lead,

Culver-cliffe.

lead, without danger. If you ſayle away from the eaſt end of Wight, eaſt and by north, and eaſt north eaſt, you ſhall run in 12 fathom alongſt over the eaſt end of them. He that is there well acquainted, may alſo ſayle to the northwards of them, through betweene the land and the Owers.

Betwixt the Owers and Portſmouth goeth in a great ſound or haven, within lieth the town of Chicheſter.

On both ſides of the Iſland Wight men may ſaile within it, and there come to anchor either under S. Ellens or before Newport where they will.

For to ſayle into the Eaſtwards of Wight you muſt bring the eaſterne caſtle that lieth to the eaſtwards of Portſmouth over the Lyme-kilne (that is, a white ſpot in the land to the northwards of that caſtle) and keepe them ſoo one over the other, until that the Culver cliffe come, within or under the northeaſt poynt of Wight. Then bring the Lyme-kilne over the eaſt end of Portſmouth, & keepe them ſoo untill that the caſtle to the weſtwards of Portſmouth come to the wood: Thus doing you ſhall come neare neither plate nor ſand, to take any hurt of them, and you ſhall come ſoo by little and little before S. Ellens Church. When the Church commeth two ſhips lengths within the red poynt, then you ſhall not come too neare the riffe at the poynt. Or elſe if you cannot ſee the Lyme-kilne, then keepe the Caſtle to the weſtwards of the Culver cliffe, untill that S. Ellens Church commeth a ſhips length without the poynt of the Iſland, goe then boldy northweſt in, and you ſhall not come too neare the riffe; And then bring the ſquare Tower betwixt the eaſt end of Portſmouth, and the Caſtle: When the Caſtle to the weſtwards of Portſmouth commeth to the eaſt ſide of the Wood, then you ſhall not (as here before is ſaid) come too neare either the plate or the ſand, to take any hurt of them.

When the eaſtermoſt white ſpot ſtandeth a ſhips length to the weſtwards of the Caſtle, then you are to the eaſtwards of the riffe, and when the Culver cliffe is covered or hidden behind the n. e. poinit of the Iſland, then are you alſo within the riffe. The markes of the little plate are theſe, there ſtandeth a ſquare tower within the land, & a caſtle on the water ſide to the eaſtwards of Portſmouth, thwart from it lyeth the foreſayd Lime-kilne: when that commeth to the eaſtwards of the foreſayd Caſtle, ſo that you may even ſee through betwixt them both, then are you upon the little plate which at low water is not deeper then 10 foot: then ſtandeth the caſtle to the weſtwards of Portſmouth at the weſt ſide of the Wood. But when the foreſayd ſquare tower commeth to the weſt ſide to the foot of the Caſtle, & the Caſtle by weſt Portſmouth to the weſt ſide of the Wood, there it is deepe at low water upon the little plat 12 foot.

Markes of the plate.

When the ſquare Tower ſtandeth betwixt the eaſt end of Portſmouth, and the Caſtle even betwixt the Lyme-pit and the Tower, and the Caſtle by weſt Portſmouth in the weſt ſide of the Wood, there it is at high water, tenne fathom deepe.

When Saint Ellens Church lyeth ſouthweſt and by weſt from you, then lyeth the ſoutheaſt end of the plate northeaſt and by north from you, and the weſt end north and by eaſt.

From the poynt of the roade of Newport eaſtwards lyeth a broad ſand alongſt the ſhoale, called No mans land, which falleth almoſt dry at low water, it is ſo ſteepe, that halfe a cables length off from it, it is twelve fathom deepe: upon the high land of Wight thereabouts ſtand two or three mills. If you come neare the ſhoare, that the foreſayd mills bee hidden behinde the foreſayd high land, you ſhall not miſſe to come aground againſt that foreſayd ſand, but ſo long as you can ſee theſe mills you ſhall goe cleare of it.

No mans land.

The Roade of the Cowes is the beſt Roade in Wight. Over againſt, betwixt that and Calſhot Caſtle, lyeth a hard ſand neareſt the north ſhoare, lying from thence to the weſtwards alongſt the fareway, almoſt ſoo farre as thwart of Newton, called the Brambles: at low water and ſpring-tydes it falleth almoſt dry, and then the ſea breaketh much upon it: to the northwards of it goeth alſoo a channell through, but it is not to be uſed, but with ſmall ſhipping.

The Brambles

For to ſayle in at the weſt end of Wight, you muſt runne right in with the Needles, (they are high ſharpe Rockes as Maſts lying at the Weſt end of Wight) bring then the innermoſt poynt of Wight, or the Caſtle that ſtandeth upon the chindle over againſt that poynt, called Hus caſtle a little without, or to the northwards of the Needles, ſayle in there upon, untill you come to the Needles, leave them then on the ſtarboard ſide of you, and run in within a cables length alongſt by them for to avoyd the bancks which lye off from the chindle to the northwards of the Needles, of the weſt end of Wight almoſt to the Needles. Betwixt the bancks called the Swingels, and the Needles, it is not very broad, and at low water 5 fathom deep. When you ſayle in here, you muſt caſt your tydes well. The fore-flood falleth ſtrong upon the bancks. When you are then come within the Needles, then edge a little more off from the ſhoare unto Hus Caſtle that ſtandeth upon the Chindle, for to avoyd ſome Rocks which lye alongſt by the Iſland under water. Being come within the Caſtle or Chindle, there it is wyde & broad, leave two third parts of the channell on the larboard ſide, and one third part on the ſtarboard ſide, ſayle ſoo in untill you come before the village Newton, & anchor there in nine or ten fathom, or elſe ſayle forth (if you will) about the poynt of the Cowes, and anchor there before the haven of Newport in tenne or twelve fathom, there is the beſt Roade, and the beſt lying of all the Roades in Wight. The Haven or Roade before Newport lyeth from the foreſayd Hus Caſtle upon the Chindle northeaſt and by eaſt, and eaſtnortheaſt about two leagues aſunder.

For, to ſayl in at the Needles.

From the Needles of Wight weſt and by ſouth about three leagues, lyeth the poynt of Saint Albons land, called Peverell poynt, from it lye off ſome little Rocks to the eaſtwards. A little to the northwards of that poynt is a Bay, called the Bay of Sandwitch, there is a good road for them that are bound to the weſtwards; If you will goe to ryde there comming from the weſtwards, you may take the ſounding of Saint Albons land, and runne aboard the poynt in foure or five fathom at a halve flood, and you ſhall take no hurt of thoſe little rocks. Being gotten about the poynt, edge by it up to the weſtwards towards Sandwitch. A little to the northwards of Sandwitch in the Baye, lyeth a round Hommock, & thwart of it ſomewhat within the land ſtandeth a mil; bring that mill to the ſouth ſide of the round Hommock, and ſayle ſoo in untill you come in foure or three fathom, and anchor there ſoo deepe or ſhoale as you will, there it is good lying for ſouthweſt winds.

Peverell poynt. Sandwitch Bay.

A little league north and by eaſt from the foreſayd poynt, right weſt from the Needles of Wight, lyeth another poynt, called Handfaſt poynt, to the northwards of it lyeth a little Towne, called Studland, before it is alſo a good roade. Upon the outermoſt part of that poynt, is a hole through the land, where men may ſee through, and a little without the poynt ſtandeth a high ſteepe rocke like a Maſt, allmoſt like the Needle at the weſt end of Wight. For to come to ride before Studland: you muſt ſayle about the ſecond poynt, with the hole or the ſteepe rocke, in foure or five fathom, and goe in weſtnorthweſt towards Studland: a little to the ſouthwards of it lyeth a little valley, bring that weſtſouthweſt from you, and goe towards the ſhoare, in foure or three fathom and a halfe, there is the beſt roade, & lying there, you may ſee the foreſayd hole in the poynt.

Handfaſt poynt.

Studland

A league to the northwards of that foreſayd poynt with the hole, lyeth the haven of Poole, for to ſayle in there, comming about the foreſayd ſecond poinit with the ſteepe rocke, you muſt goe on northweſt, or ſomwhat more northerly, and then you ſhall ſee right a head of you, a high flat hill, which ſtandeth higher then any other land

Poole.

thereabouts, keepe that betwixt the two ſhoares, and run in ſo right with it. If you muſt turne toe and againe, then ſpare not to uſe your lead, and runne not further over to the weſtwards, then that the flat hill come to the weſtland, ſo ſoone as it beginneth (as it were) to touch it, you muſt caſt about, or elſe you ſhould be faſt aground: And after you have caſt about, runne not further over to the eaſtwards, then that the foreſayd high flat hill commeth even to the eaſt ſand-hill, which is a high, gray, ſharp ſand-hill, lying at the eaſtſide. If you keepe theſe foreſayd markes in this manner, you ſhall have there going in at halfe flood water enough, there remaineth upon the ſhoaleſt at low water, ten and eleven foote, but it floweth there no more then five foot up and downe. It floweth there twice in a tyde. A ſoutheaſt and northweſt Moone maketh there full ſea: Alſoo a ſouth & by eaſt & north and by weſt Moone once more, that commeth to paſſe by reaſon of the fore-ebbe that commeth out of Wight. When you come within the entry, go then northnortheaſt on, and keepe the beacons that ſtand on the eaſt-land on the ſtarboard from you, and runne indifferent cloſe alongſt by them. The ſhoares are on both ſides ſteepe, and the channell is not wide, without the channell it is ſhoale or flat. This is Pilots water.

Portland. From the weſt end of Wight to the poynt of Portland, the courſe is weſtſouthweſt, eleven leagues, but from Dunnoſe, the ſouthweſt poynt of Wight, weſt and by ſouth thirteene leagues.

Road under Portland. If you will goe to anchor under Portland (comming from the weſt, then come within two cables length, or a ſhot of a caſt peece about by the poynt of Portland, and being come about the ſecond poynt, edge up to the weſtwards untill you come before the caſtle, and anchor there in 7. 8. 9. 10. or 11. fathom, ſoo that the poynt of Portland doe lye ſouth and by eaſt, and ſouthſoutheaſt from you, there you ſhall lye landlockt for a ſouth and ſouth and by eaſt winde. With a ſouthweſt and a ſ. ſ. w. winde, men muſt be very mindfull of terrible rippeling of the race of Portland, which beginneth a little to the weſtwards of Portland, and endeth a little to the weſtwards of S. Albons. The ground in that race is alſo very uneven, & ſhoale, ſometimes ſeven, otherwhiles ten, and alſo fifteen fathom deepe.

Waymouth. About a league to the northwards of the road of Portland lyeth a little Towne, called Waymouth, with a tyde-haven, before it men may anchor in foure or five fathom.

Of the Tydes and Courſes of the Streames.

At Beachy by the ſhoare before the ſeven Cleeves, the flood falleth eaſt and by ſouth, & the ebbe weſt and by north.

From Wight to Beachy e. and by n. and w. and by ſouth, thwart of Wight, before Dunnoſe, a ſouth and by eaſt Moone maketh full ſea.

At S. Ellens and the Cowes a ſ. ſ. e. Moone.

At Hampton at the kay, a ſ. and n. Moone.

Within the Needles of Wight a ſoutheaſt and by ſouth-moone.

Before the haven of Poole a ſoutheaſt and northweſt Moon maketh high water: alſoo a ſouth & by eaſt and by weſt Moone.

Thwart of Portland in the channell a ſ. ſ. e. and n. n. weſt Moone.

From Portland to Wight, the flood falleth eaſt and by n. and the ebbe weſt and by ſouth.

Of the depths.

Without Beachy thwart of the ſeven Cleves it is deepe 28 and 30 fathom.

In the offing thwart of Wight it is deepe 38 fathom, in ſuch depth men may ſee the land.

In the channell betwixt Portland and the Caskets it is 40 fathom deepe, when it is cleare weather, men may ſee the land on both ſides: the nearer England the ſhoaler towards the Caskets it is deepeſt.

Courſes & Diſtances.

From Beachy to the Owers w. and by ſ. 13 leagues.
From thwart of the Owers in 12 fathom unto Dunnoſe the ſouth poynt of Wight w. ſ. w. 5 leagues.
From Beachy to Blackneſſe eaſt 18 leagues.
From Beachy to Struyſaert ſouth 26 leagues.
From Beachy to the Caskets ſ. w. & by w. 36 leagues.
From Dunnoſe to the ſouthermoſt poynt of Wight, unto the Needles of Wight, weſt and by north and w. n. w. 4 leagues.
From the weſt end, or the Needles of Wight, to the poynt of S. Albons land weſt 4 leagues.
From the Needles of Wight to Portland weſt and by ſouth and weſt ſouthweſt 11 leagues.
From Wight to Diep e. ſ. e. 36 leagues.
From the eaſt end of Wight to Struyſaert ſ. eaſt, ſomewhat ſoutherly 29 leagues.
From Wight to the Caskets, ſouthweſt and by ſouth, 20 leagues.
From Portland to Seynhead ſoutheaſt and by eaſt, 39 leagues.
From Portland to the Caskets ſouth and by eaſt. 13½ leagues.

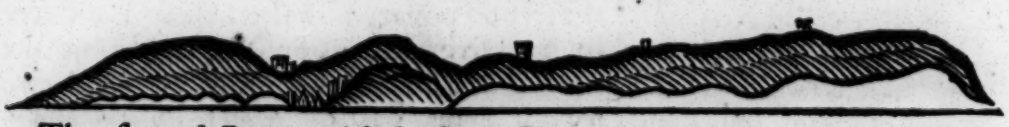
Heights.

Dunnoſe the ſouthermoſt poynt of Wight lyeth in 50 degr. 36. min.
Portland lyeth in 50 degr. 26. min.

How theſe Lands doe ſhew themſelves at Sea.



Beachy ſheweth thus when you come from the weſt.

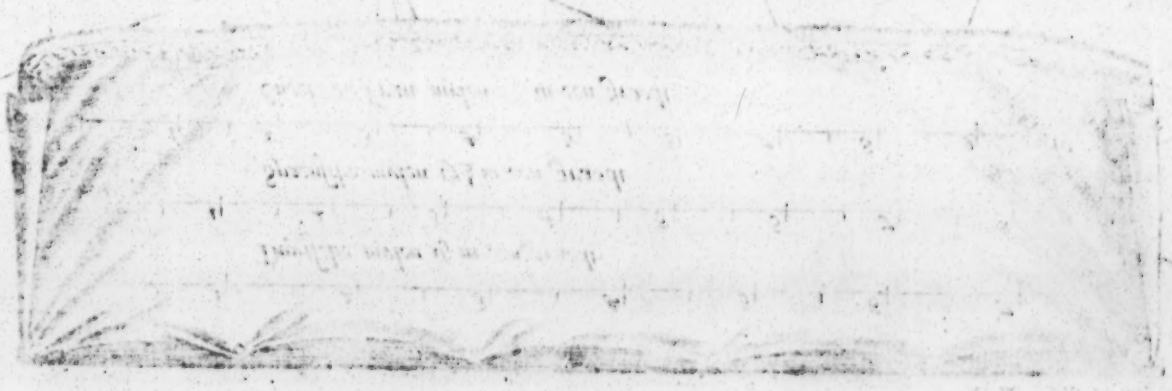


Thus ſheweth Beachy with the ſeven Cleves, when you come from the weſt, and ſayle alongſt by it.



Thus ſheweth the Iſland Wight, when you ſayle alongſt by it, being 3 or 4 leagues a ſeaboard the land.

Por



Duytsche mylen 15 in een graedt

Spaensche mylen 17½ in een graedt

Engel: en Fran. mylen 20 in een graedt

C O R N W A L.

Truro

Peryn

Vaelmuyen

Mans

Mans east.

Dodmans hoyst

Pentam

Gwin

Trewardreth

Foye

Fawyck

Tallack point

Wyfl

I. Lou

Wyfflecombe

Wyfthorns Hoyt

Pleimuyen

Mallrok

Egbooms

Rainshoyst

Kallenick

Kockroot

Mouston

Wemberye

Mousstoon

Idefton

Lezard

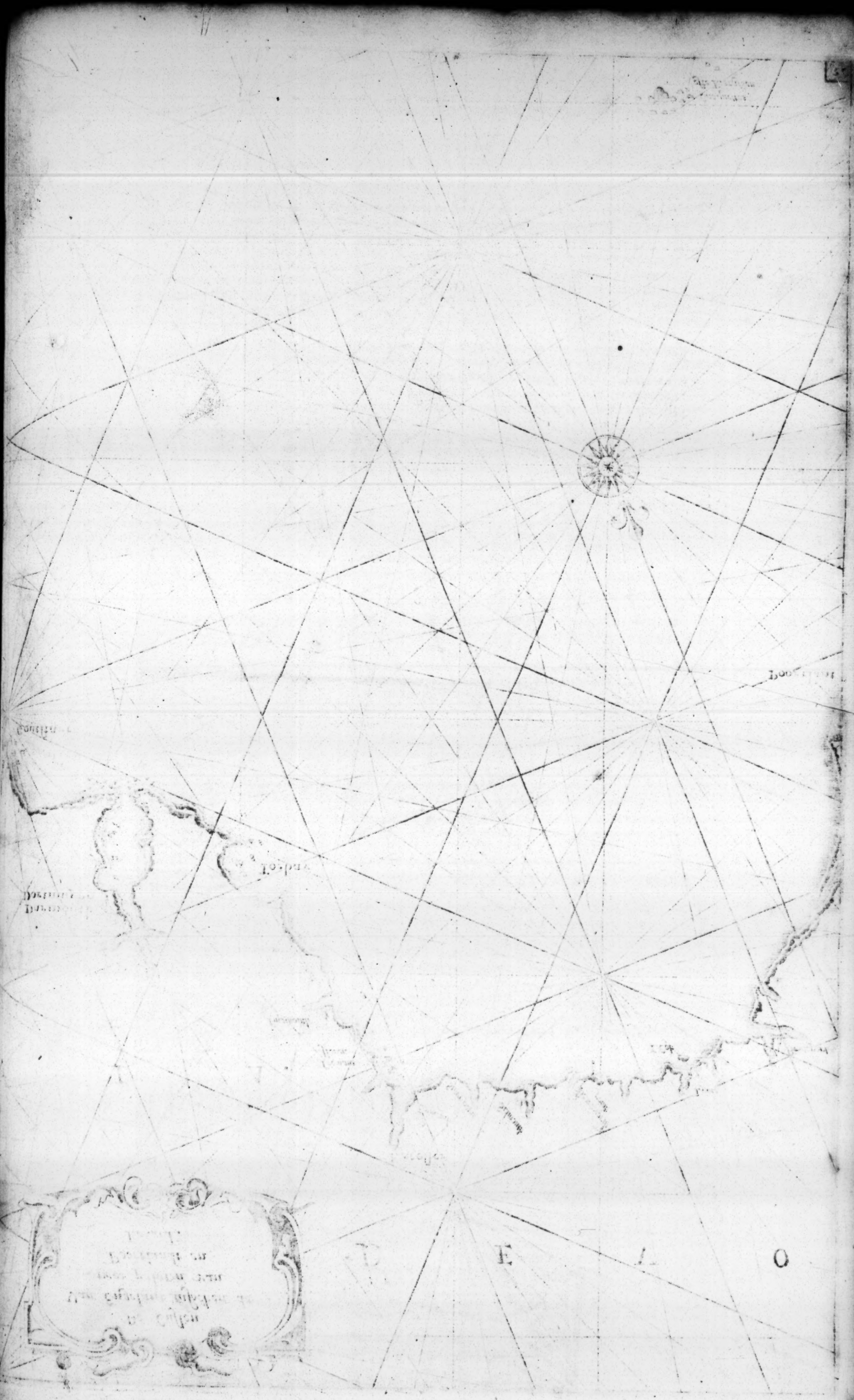
Pick point

De Cuſten
Van Engelant tuſſchen de
twee pointen van
Poortlandt en
Lezard.

D E V O

L A

Excester
Exmouth
Start Point
Sidmouth
Beerzoorth point
Lyme
I. Cob
Bridport
Toemans stoun
Ingmouth
Darmouth
Dortmuyen
Torbay
Coutstart
Poortlant
Casquettes
ofte Kiscaßen



Portland.



Thus ſheweth S. Albons land, with Portland, to the weſtwards of it, when you ſayle alongſt by it, being to the eaſtwards of Portland.



Thus ſheweth Portland when you come from the weſtwards.



Thus ſheweth Portland, when it is north & by weſt from you ſix leagues of.



Thus ſheweth Portland, when you come from the eaſtwards.

The fourth Demonſtration.

Wherein

Are ſhewed the Coaſts of England, from Portland to the Lizard.

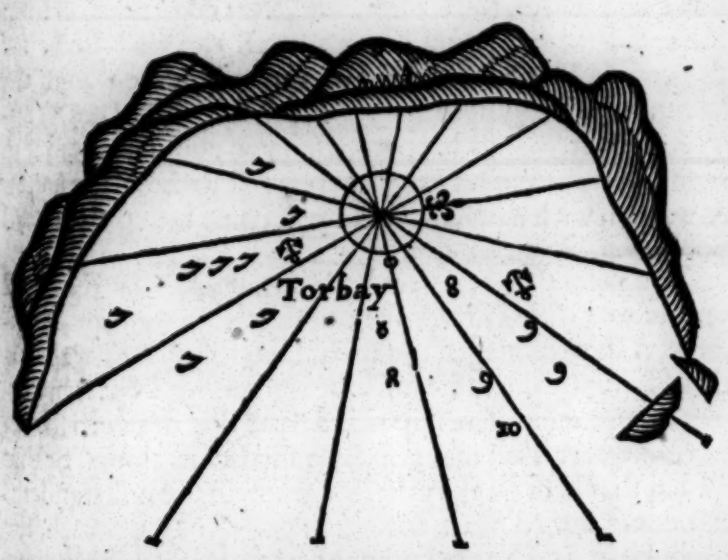
FRom Portland to Exmouth, the courſe is weſt-northweſt thirteene leagues; betwixt them both lyeth a little Iſland cloſe by the land, called Cob. Before Exmouth men may ride (at the ſouth end of the Chindle, which lyeth before the haven) in ſeven or eight fathom, ſoo that the rocks of Tomanſtones doe come to lye ſouth and ſouth and by eaſt from you, there it is good ground, and lancklockt for a ſouth winde.

Cob.

Five leagues ſouth, and ſouth and by weſt from Exmouth lyeth Torbay, and lyeth from Portland weſt, and weſt and by ſouth diſtant thirteene leagues.

Torbay.

TORBAY.



For to goe into the roade of Torbay, you muſt bring the weſt poynt ſouth and by eaſt, and ſouthſoutheaſt from you, and anchor there in 7 or 8 fathom, you ſhall lye land-lockt for ſouth and ſouthweſt windes. At the north-eaſt ſide of the bay is alſoo a tyde-haven before it, it is good anchor ground in foure or five fathom, according as you will lye neare or farre from the ſhoare.

Three or foure leagues ſouthwards, or to the weſtwards of Torbay, lyeth the Haven of Dartmouth, which hath a narrow entry, lying in betwixt two high lands, upon each ſide of the Haven ſtandeth a little Caſtle, in time of warres they were wont to ſhut it over with a chaine, on the Weſtſide ſtandeth a little Church on the high land. For to ſayle in there comming from the Steart or from the weſtwards you muſt run in alongſt by the weſter-land, ſo farre to the eaſtwards untill you bring the kay of the village (that lyeth on the eaſt ſide of the haven) in the middeſt of the entry of the Haven, and ſayle ſo in, keeping the middeſt of the Haven betwixt the two lands, and you muſt bee very ready with the boat (if there ſhould come any fore ſlangs from of the high land) for to row in. Being come in, edge over to the weſt-ſide, before the Brewhouſe, and anchor there in ten or twelve fathom, or before the village on the eaſt-ſide where you pleaſe.

Dartmouth.

At the eaſt-ſide of the Range lyeth a ſuncken Rock, the marks for to avoyd it are theſe. To the eaſtwards of Dartmouth is a red poynt, which below by the water is black, and in the red lyeth a white ſtone, when the white ſtone commeth over the black poynt, then are you thwart of the ſuncken Rock, but if you ſee the kay of the village and doe as before is ſayd, then you ſhall not come too neare that ſuncken rock to take any hurt of it.

Betwixt Dartmouth and the Steart, neareſt to Dartmouth ſtandeth a ſpire ſteeple indifferent high and white, called Tackman, that is a very good marke to know the haven of Dartmouth by.

The Steart lyeth from Dartmouth ſouthweſt diſtant three leagues. Under the poynt of the Steart at the eaſt ſide is a good roade for weſterly windes, betwixt the little Church that ſtandeth upon the high land, and the poynt of the Steart in tenne or eleven fathom, ſo that the poynt lye ſouthweſt from you.

Steart.

A little to the eaſtwards of the weſtermoſt poynt of the Steart lyeth a haven, called Salkom, when you come from the weſt, it ſheweth it ſelfe open, the weſt ſide of it is ragged and the eaſt ſide goeth ſloping downe, cloſe to the weſtpoynt lyeth a rocke, or a rane of rockes, therefore you muſt give it a good birth, & leave the rockes on the larboard ſide: Further, you may ſee all breaks that can doe you hurt. Being come within the poynt, you can take no hurt of either of both ſhoares. Upon the barre or ſhoals of the entry, remaineth at low water with a ſpring-tyde, not leſſe then eleven foot water, & again within it is leaſt three fathom deep.

Salkom.

Seven leagues to the weſtwards of the Steart lyeth the ſound of Plymmouth, at the outermoſt eaſt poynt of the ſound lyeth a high round rock, called Mewſtoone, the weſt poynt is called Ramehead, betwixt them both goeth in the ſound Plymmouth northnortheaſt in, it is broad and deepe. A little to the northwards of Ramehead is a faire ſand-bay, where men may anchor cloſe under the land, in nine and ten fathom. Two leagues ſouth a little eaſterly from Ramehead, lyeth a Rock above water, called Eddyſtone. The poynt of Plymmouth lyeth from the Eddyſtone north and by eaſt, and northnortheaſt, diſtant about foure leagues. In the ſound, by the land of Plymmouth, lyeth a little Iſland, which is faſt to the weſt ſide with a riffe or rane of Rocks under water, ſo that men muſt ſayle alongſt to the eaſtwards of it, whether they be bound into Catwater, or into Hamoaſe the weſt harbour. If you will goe into Catwater, then runne in betwixt the Iſland, and the poynt on the eaſt ſide in with the land of Plymmouth, untill that you ſee Catwater open on the ſtarboard ſide of you, goe then into the eaſtwards betwixt.

Plymmouth. Mewestone. Eddeſtone. Catwater.

twixt the point of Plymmouth, and the foreſayd eaſt point on the ſtarboard ſide of you, leaving the moſt part of the channell on the ſtarboard ſide of you, until you come within the poynt, and anchor there right againſt that high ſteepe norther-land, there is at low water with an ordinary tyde foure and five Fathom deepe.

When you ſayle into Catwater, you muſt take heed, and give a good birth to the ſouther poynt of the entry of Catwater, for there lye off to the foreſayd poynt, a ledge of rocks under water, neare about two cables lengths from the Land, and upon the poynt of the ledge or ſhoale, lyeth a buye, where is at halfe flood about twelve foot water, which buye you muſt leave on your ſtarboard ſide in going into Catwater, and when you have Catwater altogether open, you may run into the eaſtwards, leaving (in the entry of the harbour) two third parts of the channell on the ſtarboard ſide, as before is ſayd, becauſe the ſouth ſhoare is ſomewhat flat off, there lying a ſandy bancke, which reacheth to the ſecond poynt of the ſouth ſhoare of Catwater.

A little to the eaſtwards of that foreſayd little Iſland, lyeth a rocke under water, upon which is at low water not deeper then two fathom. For to ſayle within the Iſland, you may goe into the eaſtwards, or to the weſtwards of the rock according as occaſion ſhall ſerve. If you wil ſayle into Hamoaſe, to the weſtwards of the rock, then take the ſounding of the Iſland in foure or five fathom at low water, and run in ſo by it, untill that the Fiſher Village (lying to the northwards a little within the land) come in the weſt ſide of the valley on the north ſhoare, then are you to run through betweene the Iſland and the rocke, and to the weſtwards of the rock. Within the Iſland upon the land of Plymmouth, ſtandeth a wall or hedge, when as you ſee that onendling, and the chappel of the foreſayd Fiſher Village commeth to the north-ſide of the Valley, and Catwater commeth open; then doe you runne over the Rocke. Betweene the Iſland and the maine, men may anchor in twelve and thirteene fathom.

Hamoaſe. If you bee bound into Hamoaſe, you muſt runne in betweene the Iſland and the land of Plymmouth, and then in amiddeſt the channel betweene the two Lands, untill that the entry of Hamoaſe be open, runne then into the northwards, as the channel leadeth, untill you come in about the weſt poynt, and anchor there in ſixteen, fifteen, and twelve, or teen fathom. In the narrow it is fifteene, ſixteene, ſeventeene, & alſo twenty fathom deepe, and betweene the Iſland and the maine, eight, nine, tenne and twelve fathom.

The German a ſuncken rock. About halfe a cables length to the eaſtwards of the paſſage way going into Hamoaſe, lyeth a ſuncken rock under water, called the German, about two great ſhippes lengths from the ſhoare, and at low water hath not above foure foot water upon it. And when men doe come any thing neare this foreſayd ſuncken rock going into Hamoaſe, either with the flood or the ebbe, the tyde wil ſet them right upon it, if it bee calme. Therefore to avoyd it, men muſt (with calme weather) give this foreſayd ſuncken rock a good birth, untill they bring the houſes of the Fiſher-Village, (called the Stone-houſe) open of the eaſter-poynt of the Paſſage way, and then runne in over towards the north ſhoare, untill they have hidden the Iſland in the foreſayd eaſterne poynt of the paſſage way, for to avoyd a ſuncken Rock that lyeth off to the eaſtwards from the north poynt of the Beach on the weſt-ſide of the Paſſage way, a halfe cables length off, then runne amids the channel into Hamoaſe. Upon this foreſayd ſuncken Rock at low water, is not above 3 or 4 foot water.

Suncken Rocks.

In the ſound of Plymmouth, not farre to the northwards of the Mewſtone, lye two or three ſuncken rockes, upon which remaine at low water not more then three or foure fathom water, the markes of them are theſe: to the eaſtwards of Plymmouth ſtandeth a Tower with a Mill, and to the weſtwards of the foreſayd little Iſland ſtandeth a Gentlemans houſe, when the little tower or turret of that houſe commeth over the poynt on the weſt ſide of the Iſland, & the foreſayd Tower and Mill to the eaſtwards of Plymmouth come one over the other; then are you upon the innermoſt ſuncken rocke or ſhoale, which is at low water foure fathom deepe. But when the poynt of Hamoaſe commeth even without the point to the weſtwards of the Iſland, and the foreſayd Tower and mill alſo one in the other, then are you upon the outermoſt rocke, where it is at low water and ſpring-tyde three fathom and a half deepe.

Suncken Rocks.

From Ramehead weſt & by ſouth five leagues, lyeth Foy, and betwixt them on the coaſt lyeth a little Iſland, a little to the eaſtwards of a poynt, called Talland-poynt, thwart of Weſt-Louwe, called Louw-Iſland, you may anchor there to the eaſterwards of the Iſland in 5 or 6 fathom. Louw Iſland.

Foy is a broad-haven, where a ſhip may go in at a half flood, at the eaſtſide of the haven ſtandeth a little church with a little ſteeple, & on the weſtſide a white church, ſomewhat greater then that upon the eaſt-land with a ſquare ſteeple at the weſt-end of it. Foy.

For to ſayle into Foy, you muſt have at leaſt a halfe flood, and runne in midſt the channel betwixt the two poynts, and being come within, then chuſe which ſide you will, but the moſt water is by the weſt-land, betweene the ſtakes and the Tower that ſtandeth upon the weſt-land. Being come within the Stakes (as you come in by the weſt-land) then beare ſomewhat of preſently from the weſt-ſhoare, almoſt into the middle of the channell, neareſt to the weſt ſhoare, untill you come before the Village that lyeth on the weſtſide, there is a deepe docke, where a ſhippe that draweth ſixteene foot water may lye a float at low water. In the ſayd dock may 3 or 4 ſhippes lye.

If (when you come in by the eaſt-land) you deſire to bee in the foreſayd docke or poole, then ſayle in untill you come within the ſtakes, and then edge over off from the eaſt-land untill you come neareſt the weſt-land, for to avoyd a Flat, which lyeth by the eaſt ſhoare alongſt the haven, and beginneth againſt the firſt houſe of the Weſt-Village. If it ſhould happen, that you could not lead it in with a ſayle, then let your anchor fall without the ſtakes, & warp in with hawſers, untill you come into the foreſayd poole.

You may alſo ſayle ſo farre in, that you may ſee a wall on the weſt-ſide of the haven, where lyeth a village behinde it. A ſhippes length to the ſouthwards of that wall, it is good lying by the eaſt-land, being moored by foure cables, there may alſo a ſhip ride a float that draweth ſixteene foot water. You may alſo ſayle further in alongſt by that Swach that lieth on the weſt ſide, wherein the mill ſtandeth, but come not to neare the north poynt of the Swach, for there by it, lyeth a rock under water, being paſt that you may moore your ſhip in the middeſt of the channell, there is beſt lying for ſhippes that draw much water.

Foure leagues ſouthweſt and by weſt from Foy, lyeth the poynt of Dodman, & two leagues to the weſtwards of it lyeth the haven of Falmouth. The poynt of Dodman is double Land with a round hill, which to the weſtwards goeth ſloping downe, ſomewhat towards the weſt end ſtandeth a mill with a ſharp tower, and ſome little houſes upon the land, ſomwhat to the weſtwards, men may ſee the caſtle of Falmouth upon a round Hommocke againſt the high Land. This land is very eaſy to bee known when you come from the weſt, or from the Lizard. Dodman

Upon the weſt poynt of the haven of Falmouth ſtandeth a Caſtle upon the high land, and in the entry neareſt the weſt-ſide, lyeth a great rock above water, you may ſayle about it on both ſides, at the inner ſide of the eaſt poynt lye alſo ſome rocks off from the ſhoare. For to ſayle in there to the eaſtwards, alongſt by the foreſayd Rocke, you muſt runne in within two cables lengths, alongſt by the eaſtland leaving the foreſayd rocks on the ſtarboard ſide, and the great rocke on the larboard ſide, & ſoo ſayle right in with the high land that lyeth on the weſt Falmouth.

weſt ſide within the haven. Within in the haven ſtandeth on the Land a white Chalkye ſpot, alſo a little wood of trees, keepe them over the north poynt of the foreſayd high weſt-land, and ſayle ſo right in with them, keeping them ſo untill you come neare them, you ſhall finde ſo at halfe flood, upon the ſhoaleſt, not leſſe water then five fathom, and that betwixt the foreſayd Caſtle upon the weſt poynt, and the eaſter Caſtle that ſtandeth on the eaſtſide, within the haven, over againſt it, or a little within the Caſtles. When you ſhall then come by that foreſayd high weſt-land, runne alongſt by it, unto the north-end of the ſame, and anchor there in twelve, thirteene, or fourteene fathom. You may alſo from thence edge over towards the eaſt-land, & anchor there under or behinde the banck; that lyeth of from the eaſterne Caſtle alongſt the middle of the haven, in ſixe, ſeven or eight fathom: the banck falleth almoſt dry at low water, and is ſoft ground, ſoo that the ſhippes ſit in the oaſe, when they come there a ground.

For to ſayle into the weſtwards of the foreſayd great rock, you muſt take the ſounding of the weſt-land, where the Caſtle ſtandeth upon, in five or ſixe fathom, being ſomewhat within the rock, runne (as before is ſayd) towards the weſt-land. To the weſtwards of the rock, it is in that channell ſix and ſeven fathom deepe at halfe flood, but in the channell to the eaſtwards of the rock, ſeven and eight fathom.

Foure leagues ſouth & by weſt from Falmouth lyeth the eaſt poynt of the Lizard, betwixt them both lyeth a haven, Helford. called Helford, which is little uſed for ſhips.

At the ſouth-ſide of the haven lyeth a ſteepe poynt, and on the north-ſide a low ſharpe poynt. Within the haven on the ſouth-ſide, ſtandeth a Gentlemans houſe beneath at the ſtrand, & upon the hill ſtandeth a tuſſe of trees, you muſt keepe theſe one in the other, and runne ſo amiddeſt the channell into the entry of the haven. On the north ſide ſtand alſo 2 or 3 trees, theſe come a maſts length to the weſtwards of a little houſe that ſtandeth in a white ſandy bay, there upon you may ſayle in alſoo amidſt the channell; it is a ſhort in-let, being come within, you may anchor in ſix or ſeven fathom. Upon the ſouth ſide ſtandeth alſo a ſharpe Tower, and upon the north ſide a little Caſtle upon the ſteepe land.

The Lizard hath three poynts, the northermoſt is called the Blacke-head, from that to the ſecond the coaſt lyeth ſouthweſt and by weſt, and alongſt to the third about weſt ſouthweſt, or weſt and by ſouth: from the ſecond or middelmoſt poynt, lye to ſeawards ſome rocks a cables length, or a cables length and a halfe off, called the Staggs.

To the northwards of the northermoſt, or eaſtermoſt poynt of the Lizard, betwixt Helford and the foreſayd poynt lye ſome rockes a great league off from the land, Mannackles. called the Mannackles, ſouth and by eaſt from the harbour of Falmouth, & eaſtnortheaſt from the foreſayd Blackehead, where of many of them are above water at low water, and ſome of them at high water remaine uncovered. Betwixt them and the ſhoare it is very fowle and rocky, ſo that men cannot run through betwixt them without great danger.

He that commeth out of Falmouth, and is bound to the weſtwards, muſt not goe more ſoutherly with an ebbe then ſouthſoutheaſt, or ſoutheaſt and by ſouth according as the winde ſhall bee, for to run cleare of theſe foreſayd.

Of the Tydes and Courſes of the ſtreames.

In Dartmouth and Torbay a weſt and by ſouth moon maketh full ſea.

Thwart off the Steart in the channell, a weſtnorthweſt & eaſtſoutheaſt moone.

From the Steart to Portland in the middeſt of the channell, the flood falleth eaſtnortheaſt, and the ebbe weſtſouthweſt.

Thwart of Dartmouth by the land, the flood falleth n. e. & by north, & the ebbe ſouthweſt & by ſouth.

Thwart of Torbay towards Exmouth in the baye, the flood falleth northnortheaſt, & the ebbe ſouthſouthweſt.

In Plymmouth and Foy a weſt and by ſouth, and eaſt and by north moon maketh the higheſt water.

Thwart of Foy in the channell an eaſtſoutheaſt moone.

A ſea-board of Falmouth an eaſt and by ſouth, but in the haven of Falmouth an eaſt and by north moone.

At Helford & at the Lizard, by the land, an eaſtſoutheaſt and weſtnorthweſt moone maketh the higheſt water.

From Ramehead to the Steart by the land, within the Eddy-ſtone, the flood falleth eaſtſoutheaſt, and the ebbe weſtnorthweſt.

From the Dodman to Ramehead, the flood falleth eaſtnortheaſt, and the ebbe weſtſouthweſt.

From the Lizard to the Dodman northeaſt and ſouthweſt.

In the channell betwixt the Lizard and the Steart, thwart off Foy, the flood falleth eaſt and by north, and the ebbe weſt and by ſouth.

Of the Depths.

The Steart and the land of Dartmouth men may ſee them both in five and forty fathom.

When you have the high land of Plymmouth north from you, you may ſee it in fifty fathom, it is high double land, and ſheweth it ſelfe firſt in two hilles. That ſame high double land within the land, you may ſee it from thwart of Foy untill you come thwart of Dartmouth.

The Dodman you may ſee in 42 fathom off from the Lizard to the Steart.

The Lizard you may ſee in five and fifty fathom, there the ground is white and red ſhelly ſand.

Courſes & Diſtances.

From Portland to S. Paul de Lion ſouthweſt and by ſouth 40 leagues.
From Portland to Uſhant ſouthweſt 53 leagues.
From Portland to Exmouth weſtnorthweſt 13 leagues.
From Torbay to Dartmouth ſ. w. 3 a 4 leagues.
From Dartmouth to the Steart ſ. w. 3 leagues.
From Portland to Torbay weſt, ſomewhat ſoutherly 13 or 14 leagues.
From Portland to Dartmouth weſt & by ſ. 16 leagues.
From Portland to the Steart weſtſouthweſt weſterly 19 leagues.
From the Steart to the Caskets eaſtſoutheaſt 21 leagues.
From the Steart to the Sept Iſles, ſouth & by eaſt ſomewhat eaſterly 24 leagues.
From the Steart to S. Paul de Lion ſouth and by weſt, ſomewhat ſoutherly 27 leagues.
From the Steart to Uſhant ſouthweſt and by ſouth 38 leagues.
From the Steart to Ramehead, the courſe is weſtnorthweſt 8 leagues.
From Ramehead to the Iſland of Lowe weſtſouthweſt 3 leagues.
From the Iſle of Low to Foy, weſt 2 leagues.
From Foy to the Dodman ſouthweſt & ſouth w. and by w. 5 leagues.
From the Dodman to Falmouth weſt and by ſouth, and weſtſouthweſt 4 leagues.
From Falmouth to the Lizard ſouth & by w. 4 leagues.
From the Steart to the Eddy-ſtone weſt or a little more northerly 7 or 8 leagues.
From the Eddyſtone to Ramehead north a little weſterly 2 leagues.
From Ramehead to the Dodman w.ſ.w. 8 leagues.
From the Dodman to the Lizard ſouthweſt 6 leagues.
From the Steart to the Lizard weſt and by ſouth 20 or 21 leagues.

From

From the Lizard to Garnſey eaſt and by ſouth 37 leagues.
From the Lizard to the Sept Iſles, or ſeven Iſlands, the courſe is ſoutheaſt and by eaſt 31 leagues.
From the Lizard to Uſhant ſouth 29 leagues.
From the Lizard to Cape de Finiſterre ſouthweſt 153 leagues.
And that courſe goeth about 5 leagues without the Cape.
From the Lizard to Teneriffe ſouthſouthweſt 466 leagues.
From the Lizard to Tercera ſouthweſt and by weſt 386 leagues.

Heights.

The Steart lyeth in 50 degr. 12 min.
or as ſome will hold, more northerly.
Torbay lyeth in 50 degr. 28 min.
The Lizard lyeth in 50 degrees.

How theſe Lands doe ſhew them ſelves at Sea.



Thus ſheweth the land to the weſtwards of Portland, when you ſayle alongſt by it.



The land betwixt Torbay and the Steart ſheweth thus.



Thus ſheweth the land betwixt Torbay and the Steart, when the Steart is ſouthweſt and by weſt from you.



Thus ſheweth the land betwixt Torbay and the Steart, when the Steart is weſtſouthweſt from you.



The poynt of Torbay ſheweth thus in divers forms, according as you are ſoutherly or northerly of from it.



Theſe two figures belong one to the other at the two croſſes.



Thus ſheweth Dartmouth, as it is pourtrayed in theſe two figures, when you are right thwart from it, a league or two from the land, with the land on both ſides of it, as well towards the Steart as towards Torbay, and to the northwards of it.



Thus ſheweth the Steart, being north from you 2 or 3 leagues.



The Steart being north from you 7 leagues, ſheweth thus.

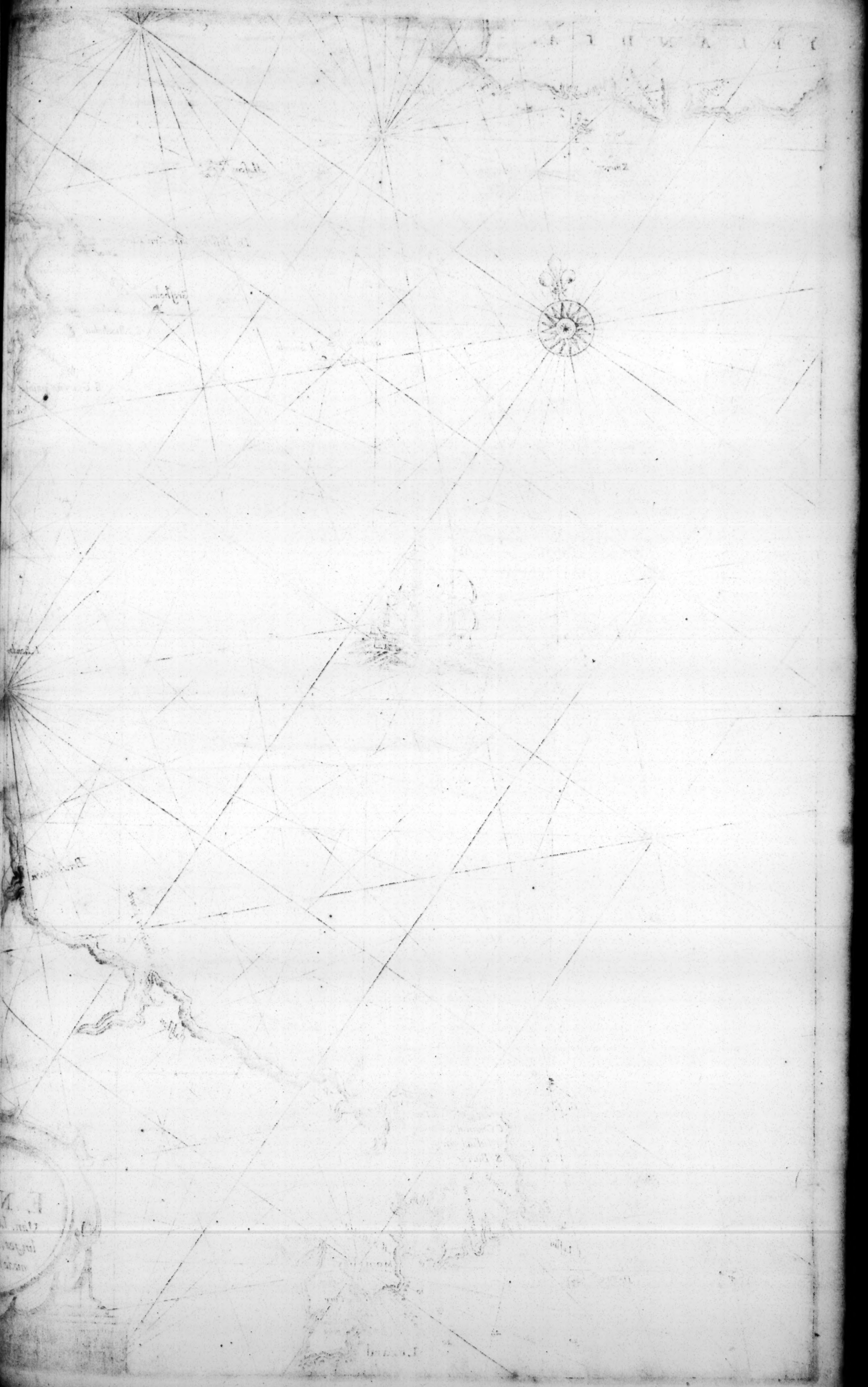


When the Steart is northeaſt from you, it appeareth in this forme, and then the poynt goeth flat downe.



Thus ſheweth the land to the weſtwards of the eaſtermoſt poynt of the Steart, towards Salckom, when you ſayle alongſt by it.

Thus



YRLANDIA.

Grenoort

Korfslip

Hoocheide

Tuskar

Sekis

Kinnor

Mascus

De Bisschop met Zyn Klercken

S. Davids

I. Ramsey

Brade bay

Gresholm

Scaline

I. Stocholme

Scalkum

I. Smeals

Kinnor

Myssord haven

S. Goivens point

De Cr

40

45

I. Lundy

Bonds haven

Stroom te Hunte

Dasson

S. Ives bay

I. Brysam

S. Ives

C. Cornwal

Whitland bay

S. Burien

Sorlinges

Sevensteen

Port Curdo

Engelande eynd

Lesarre point

Mackle Point

I. Lyssin

De Wolf

M. S. Michiel

Mont's bay

Kilsoort

Kilsson

Cury

Perdenan point

Lezard

E N E

(Van L

linges,

mede

Duytſche mylen 15 in een graadt

Spaanſche mylen 17 ½ in een graadt

Engel. en Fran. mylen 20 in een graadt.

ALS-ENGELANT.

Carmarten

Aberavon

Cardief

Newport

Denny

Briſtou

De Naes

Naes ſandt

Barry I. Sde

Engelſche gronden

Paſſe of Porſhut point

Kings rade

Stapelholm

Vphilhaven

Hundſrd

Dunſter

Mym head

Combemartin

Porlock bay

Porlock

Ilfar Combe

Bedford Haven

Barneſtable

Bedford

CORNWALL.

Cuſt van

ELANT,

tot Engelands Eyndt, de Sor:

Canaal van Breſtou, als

van Yerland gelegen ſyn.

Sorlinges

40

C O A S T O F G U I N E A

Plymmouth n. n. w. The Steart n. n. w.



Thus ſheweth the land of the Steart, and alongſt to the weſtwards of Plymmouth, when the Steart is northnortheaſt about two leagues, and the ſound of Plymmouth northnorthweſt five or ſix leagues from you.

Mewſtone. The Steart.



The Land betwixt the Steart and the ſound of Plymmouth ſheweth it ſelfe in this forme, when you ſayle alongſt by it.



Thus ſheweth the high Land to the eaſtwards of Plymmouth.

Maker Church



Thus ſheweth the Land of Ramehead, and to the northwards of it, when you ſayle into the ſound of Plymmouth.

The Dodman. Ramehead.



When you are thwart of the Dodman 4 leagues without the Land, that, and the land to the eaſtwards of it, unto Ramehead, ſheweth it ſelfe in this manner.

The Dodman when you are right before it.



Thus ſheweth the Land to the eaſtwards of Falmouth, when you ſayle alongſt by it a league a ſeaboard the Land.

Lizard. Falmouth. Dodman.



Thus ſheweth the land betweene the Dodman and the Lizard

Lizard. Hilforth Falmouth.



The Land betwixt Falmouth and the Lizard ſheweth thus when you are before Falmouth.



Thus ſheweth the Lizard when you ſayle alongſt by it.

The fifth Demonſtration.

Where in

Are delineated the Coaſts of England, from the Lizard, and the Landsend, to the C. of Cornwall, the Sorlings and the channell of Briſtow.

The Li-zard.

THE Lizard is a low poynt, where ſome rocks lye off from it, upon the ſouth end ſtandeth a Tower, and upon the high land towards the n. end ſtandeth another tower which is ſharpe.

Mounts-bay.

About five leagues northweſt from the Lizard, lyeth a great Baye, called Mounts-Bay, at the weſt poynt of that bay lyeth a little Iſland, whereupon ſtand 2 little ſhort towers like beacons, on the eaſt ſide in the bay lyeth another high little Iſland, whereupon ſtandeth a Caſtle, called S. Michaels Mount on the eaſt ſide of this Baye, lyeth a great ranne of rocks, which lye off into ſea a league from the land, whereof men muſt take good heed in dark weather, from thence to the ſouthward towards the Lizard the coaſt is all a alongſt full of rocks, but theſe lye not ſo farre off from the ſhoare.

S. Michaels Mount.

For to ſayle into Mounts-Bay, comming from the Lands end, or from the Lizard, & being to the weſtwards of the foreſayd rane of rocks, you muſt runne in right with the little Iſland called Saint Michaels Mount, ſo long untill you come within a half league of it, then edge up to the weſtwards towards the Bay, untill that you ſee that foreſayd little Iſland, with the 2 little ſhort towers at the

Lands-end of England. weſt poynt, leave it on the larboard ſide, & runne in cloſe alongſt to the northwards of it, for it is very cleane, but leave the caſtle a great wayes on the ſtarboard ſide, being fowle about it. Being come within the little Iſland at the weſt poynt, you ſhall ſee within it a great ſandy baye, anchor there in ſeven or eight fathom. Eaſtſoutheaſt and ſoutheaſt winds doe blow there right open in, for all other winds you lye there landlockt.

Foure leagues to the weſtwards of Mounts-Baye lyeth the Lands-end of England, and lyeth from the Lizard w. n. w. diſtant nine or ten leagues. About a league ſ. e. from the Lands-end and halfe a league without the land, lyeth a ſuncken rock, which at low water commeth above water. Thwart off that rock ſtandeth a Church upon the land, when you can but even ſee that over the high land, then are you thwart of the foreſayd rock, to wit, even as farre from the land as the rock, but when the Church is hidden behinde the high Land, that you cannot ſee it, then are you nearer to the Land then the rock, or within the rock towards the Land, and ſo you ſhall goe through betwixt it and the Land.

Upon the Lands-end of England lye two round hills, when you get ſight of them you ſhall ſee upon the higheſt a ſpire tower, comming ſomewhat nearer, you ſhall ſee upon the outtermoſt end, in the low land, another ſpire Tower, there by is the Lands-end reaſonable well to bee knowne. The ground is thereabouts whitiſh ſand, with red ſand, and mingled with ſhels.

From the Lands-end unto the C. of Cornewall, or to the little Iſland Breſam, lyeth the coaſt moſt north about 5 leagues.

Rocks on the Lands-end At the Lands-end lye ſome rocks, you may runne in within them as well to the northwards as to ſouthwards, & come to anchor in 8 or 9 fathom: to come in there from the ſouthwards it is narroweſt, & tenne fathom deepe: from the northwards it is beſt and broadeſt, and eight and nine fathom deepe; but on the left ſide cloſe to the north poynt of the Lands-end lyeth a ſuncken rocke, which you muſt avoyd when you ſayle in there.

Silly. Silly lyeth from the Lands-end weſtſouthweſt diſtant eight leagues, but from the Lizard weſt, ſixteen or ſeventeen leagues.

Seven ſtones. Betweene the Lands-end and Silly lye de Sevenſtones weſt and weſt and by ſouth foure leagues from the Lands-end, and north eaſt, and by eaſt and e. n. e. allmoſt 3 leagues from Silly, that is, a rane of rocks which come not above water, but alwayes breaketh upon them,

Southſouthweſt and ſouthweſt and by ſouth 3 leagues from the Lands-end, and 5 leagues eaſt from Silly, The Gulfe. lyeth alſo a ſharpe rock, called the Gulfe, which commeth at halfe tyde above water, and is round about indifferent cleane.

For to ſail into Silly. Silly is divided into divers Iſlands, alongſt the weſt ſide lyeth a great multitude of rocks, men may goe in there through divers channels or ſounds, but the ſouther channell is the beſt. About the middeſt of the entry of that ſound or channell, lyeth a ſuncken rock, men may goe in on both ſides of it, but to the eaſtwards of it, it is broadeſt and beſt. For to ſayle in there comming from the eaſt, you muſt runne alongſt by the eaſt land in eight or nine fathom, and you ſhall ſo runne alongſt to the eaſtwards of that foreſayd ſuncken rock, which lyeth againſt a ſconce a little without the caſtle. The markes to avoyd this Rock, are two rocks which lye on the weſt ſide within the haven, the one (to wit the innermoſt) is ſomewhat greater then the other. If you bring them one in the other, or the northermoſt a little to the eaſtwards of the ſouthermoſt or the ſmalleſt ſo that you may even ſee through betweene them, and ſayl ſoo right in, keeping them ſoo, you ſhall ſo ſayle farre enough to the eaſtwards of the Rock. If you come from the ſouthwards or the weſtwards, and are bound into Silly, then runne towards the eaſtland ſo long untill you bring the two foreſayd rocks within the haven, one in the other, or even through one another, ſayle then ſoo in, and then you ſhall runne (as before is ſayd) cleare of the foreſayd ſuncken rock, thwart of the ſconce. At the inner poynt of the Iſland, at the eaſt ſide of this ſoutherne channell, lyeth another ſuncken rock, whereof men muſt take heed. For to avoyd it, you muſt run ſo long to the northwards, upon the markes of the foreſayd two rockes, untill you may ſee the little Tower in the ſandy Bay, then goe to the eaſtwards, unto the Bay, & anchor there in eight or nine fathom. When you come neare Silly upon the ſouth ſide, you ſhall ſee a ſquare Tower in the ſandy bay or valley, and to the weſtwards many little Iſlands and rocks. The ground of Silly is ſomewhat ſtony with ſome red ſhels.

Of the Depths and many ſorts of grounds before and in the channel betweene Silly & Vſhant, and thereabouts.

Southweſt and by ſouth from the Seames ſeven leagues Seames it is deep 72 fathom, the ground pale, white courſe ſand, like ſmall fretted little ſtones, with little peeces of queenes ſhels with gray flat little ſtones, and white gliſtering needles, ſayle from thence north and north and by eaſt, and then you ſhall fall well to paſſe with Uſhant.

About two leagues ſouthweſt from the Seams it is deep 52 fathom, the ground there is white, yellow, rough, and ſomewhat longiſh ſand, with a little red ſmall ſhelly ſand, with many gray crompeld things, and ſome ſmall with gliſtering poynts of needles. If men did finde there 70 or 80 fathom, they would judge it to be good channel ground.

Weſt ſouthweſt from the Seames, ſoo farre from the Seames land, as men may but even ſee the Sheets from the poop, with cleare ſight, it is 54 fathom deep; the ground is red, yellow, white and black peeces, like parings of cheeſe, and a little courſe red ſand mingled with all.

Weſt and by ſouth eight or nine leagues from the Seames Seames is 65 fathom, the ground is white yellow, with a little red ſmall ſhelly ſand, with ſome peeces of ſhels & queens, not very great, with much white and yellow ſome thing long ſand, and ſmall white things like poynts of needles, like as men find in the channell.

Seven leagues ſouthweſt from Uſhant, or thereabouts, Uſhant that men may even ſee it from the poop, having cleare ſight in 70 fathom, there the ground is white and yellow courſe ſand, with ſome peeces of queenes ſhells, and ſome peeces of white thin ſhels, with ſome gray flat ragged ſtones.

Southweſt and by weſt from Uſhant, about 19 or 20 Uſhant leagues in 78 or 80 fathom, the ground is white and yellow courſe ſand, with ſmall gliſtering needles, with white peeces of queens ſhels, and gray and yellow flat ſtones, and little peeces, like as it were of Oyſter ſhels.

Weſt and by ſouth from Uſhant 21 leagues, in 68 fa- Uſhant thom, the ground is red, yellow, and black, mingled with a little white round ſmal ſand, like ſhelly ſand. But in 80 fathom, 21 leagues weſt and by ſouth off from Uſhant, the ground is yellow and ſhelly, with ſome gray and crompeld little needles, like ends of ſmal rye.

In eighty fathom 24 leagues from Uſhant weſt & by Uſhant ſouth, men finde rough great ſand, with many ſorts of ſhels, red, white, yellow, and gray, with peeces of queene ſhels.

From Uſhant weſt 16 or 17 leagues, in 75 fathom, the ground is white and yellow courſe ſand, with peeces of thin white ſhels, and gray peeces of queenes ſhels like as it were of Oyſter ſhels, white ſmal white gliſtering things like needles.

Eight or nine leagues from Uſhant it is deepe 70 fa- Uſhant thom, the ground red, white, yellow, and gray ſhelly ſand, with red, yellow, & black peeces of ſhels, and ſmal red, yellow, black, and gray ſtones, with ſome ſmal white things like needles.

Eight and forty leagues weſt and by north from Uſhant, and 50 fathom weſtſouthweſt from the Lizard, or thereabouts, it is deepe 95 fathom, the ground red, yellow, and black ſand, with ſmal white round ſhelly ſand

ſand, and ſome little peeces of ſhels, and queen ſhels, with ſome peeces of thin ſhels.

Three and thirty leagues weſt and by north from Uſhant and 27 leagues ſouthweſt and by ſouth Silly, in 95 fathom, the ground is gray, red and yellow, mingled with ſmal black ſands, with darke, red, white, and yellow peeces of ſhels, to wit, gray and red ſhelly ſand. An eaſt-northeaſt courſe from this ground off, is the beſt, it is in the height of about 49 degrees.

Foure and twenty leagues weſt, or weſt and by north from Uſhant, and ſ. and by weſt from Silly 21 leagues in 80 fathom, there the ground is white, gray, red and yellow fine ſmall ſhelly ſand, with little red and white peeces of little ſhels, like bruiſed muſtard ſeed in the heyght of 49 degrees.

Seven or 8 leagues weſt and weſt and by north from Uſhant in 68 or 70 fathom, there the ground is white and yellow, ſmal ſhelly ſand, mingled with many gray crompeld little things, like needles.

About 30 leagues ſomewhat more northerly from Uſhant, in 90 fathom, the ground is ſmal white rough, & ſomewhat long ſand, mingled with a little red and yellow, & ſome gliſtering little things like needles, with two or three peeces of white gray ſhels. If you goe on from thence northeaſt and by north, until you come in 55 fathom, there the ground is yellowiſh, white courſe ſhelly ſand, with white peeces of ſhels; then you may ſee Silly lye nine or tenne leagues north or ſomewhat more weſterly from you.

Weſtnorthweſt from Uſhant 21 leagues, and ſouthweſt and by ſouth from the Lizard 27 leagues, in 80 fathom, the ground is gray and red ſhelly ſand, there commeth alſo on the lead a litle peece or two of white or gray queene ſhels, with yellow and red peeces of ſhels, alſoo peeces of perriwinckles.

Nine leagues northweſt and by north from Uſhant, the ground is white and yellow rough ſhelly ſand, with gray crompled gliſtering little things like needles, there come alſoo on the lead little things like ſmal ſtraws. If you goe on northeaſt from thence, you ſhal fall with the Steart.

Twenty leagues northweſt & by north from Uſhant, and 16 leagues ſouthweſt ſomewhat ſoutherly from the Lizard in 68 fathom, the ground is white yellow and red ſmal round ſand, with ſome white gliſtering little things like needles, with one or two little gray crompled things like needles, and two or 3 little peeces of little white ſhels.

Nineteen leagues n.n.w. from Uſhant, & 12 or 13 leagues ſ. ſ. w. from the Lizard, it is 68 fathom deepe, the ground is there all manner of ragged ſtones, gray, red & black with red peeces of ſhels, & ſome gray crompled little things like needles.

Nineteene leagues north and by w. from Uſhant, the ſouth from the Lizard, it is deepe ſixty two fathom, the ground is white & courſe ſhelly ſand, with white & gray crompled little things like needles, with white peeces of ſhels, and 2 or 3 little ſtones amongſt it.

Twelve or thirteene leagues weſt from Silly, or ſomewhat more northerly, it is deep 60 fathom, the ground is gray and oaſie, mingled with ſmal black ſand. In ſome places of the ſame depth it is white gray oaſie ſmal ſand, with peeces of thin white ſhels amongſt it, with a little peece or two like parings of cheeſe: this ground cannot begotten up with candle tallow, or other hard tallow upon the lead, but with ſoft tallow, or butter. In theſe depths you have no where ſuch oaſie ground as there, whereby men may well know that they are on the back ſide of Silly or England, to wit, weſt from Silly.

Weſt from Silly 7 leagues, it is oaſie gray ſand with 2 or 3 little peeces like parings of cheeſe.

Seven or 8 leagues ſ.ſ.w. from the Lizard in 16 fathom, the ground is white groſſe with a little red ſand, with little ſhels, and little gliſtering white things like needles. Nine or ten leagues ſouth and by weſt from the Lizard, in 60 fathom, the ground is yellow pieces of ſhels, and gray pieces of ſoft flat ſtones like parings of cheeſe, with ſome red pieces of ſhels, without any ſand there in.

South weſt and by weſt from the Lizard and ſouth-ſouthweſt from Silly 19 leagues, it is deep 78 fathom, the ground gray, yellow, and red ſhelly ſand, with red, yellow, and blue pieces of ſhels, with queene ſhels, and a piece or two like parings of cheeſe, or like pieces of Oyſter ſhels, with alſoo two or three gliſtering little things like needles, in the height off about 49 degrees, and 30 minutes. Liza: Silly.

Fifteen or ſixteen leagues ſouthweſt and by ſouth from the Steart, in 57 or 58 fathom, the ground is full of pieces of all maner of ſhels, and queen ſhels, with a little yellow and white ſhelly ſand, with many ſorts of little ſtones, and gray little pieces like parings of cheeſe, with ſome crumpled, and ſome not crumpled, but little gliſtering things like needles, and little things like maggots that are in Bacon. Steart.

South ſouthweſt from the Steart, ſixteen leagues, in 53 fathom, the ground is white reddiſh ſhelly ſand, with pieces of queene ſhels, with red gray little ſtones.

South weſt from the Steart 8 leagues, it is deep 40 fathom the ground gray and red ſhelly ſand. Steart.

South ſouthweſt from the Steart, 13 or 14 leagues, it is deep 47 fathom, the ground pale muddy ſand, with little long things, and little ſtones.

A great kenning ſouth ſoutheaſt from the Staert, it is deep 40 fathom, the ground red ſandy clay with pits in the tallow.

Southweſt eleven or thirteen leagues from the Steart, in fifty fathom, the ground is white and yellow ſmall ſhelly ſand, with ſome pieces off white ſhels, with gray and crumpeld, and alſo gliſtering little things like needles. In fine, he that ſoundeth much, getteth many & divers ſorts of grounds and ſometimes great change in little diſtance of place. But he that ſoundeth & findeth white ſhels, with little things like ſtrawes and needles, it is certaine that he is neareſt to Uſhant: but if he finde brandy ground, or blacke little ſtones mingled with white little things, then is he neareſt to Silly. Steart.

Hee that ſoundeth thwart of Uſhant, and findeth ſmall white ſand, and little ſhels, and ſmall little things oaſie and white. Uſhant ſhall then lye north eaſt from him. If he finde long ſmall little things like needles, then ſhall Uſhant lye ſoutheaſt from him. But if he be not ſure of theſe grounds, then he ſhall beare to the northwards. And if he finde deeper water then he is towards the Seams, but if hee finde it ſhoaly, then he is in the entring of the Channell to the northwards of Uſhant. If he be between Uſhant and the Seams in 70 fathom, he ſhall finde the ground to be ſmall little ſtones like black ſand of the earth: or elſe if he finde the ground to be great red ſand, then he muſt ſtand to the northwards, untill that he finde the white ſandy ground, and long ſmal things then he may hold himſelf certaine to be in the entring of the channell. Marks of Ushant & Silly.

From the Lands-end off England to the C. of Cornwall, the coaſt lieth north about 5 leagues, but Silly and the foreſayd Cape lie ſouthweſt and northeaſt diſtant about 9 leagues. By the Cape lieth a little Iſland or Rock, called Breſam, betwixt it and the Cape men may ſayle thorough. I. Breſam

From the Cape of Cornwall unto the little Towne Saint Yves, lieth the coaſt about eaſt and by north, and eaſt northeaſt five or ſixe leagues. Saint Yves lieth upon the weſt poynt off a great Bay, which is about two leagues broad. At the eaſt poynt off the Bay lieth a little Iſland, there lieth off from it a great ledge off rocks, a great halfe league thwart off into ſea, where off many off them come at halfe ebbe above water, therefore he that commeth off from the Cape off Cornwall, and will ſayle alongſt the coaſt towards Stoupert or Padſtow, muſt keepe off (thwart of this ledge) at leaſt a great league from the ſhoare, becauſe off the foreſayd rocks. Betwixt that foreſayd little Iſland at the eaſt poynt off the Bay & the maine land, it is alſo at many places rocky and foule, ſoo that one that is not there very well acquainted, may not ſayle through S. Yves.

there without great danger. In the Bay of Saint Yves is on both sides good sandy ground, where men may anchor all over, and come soo neare the shoares as they will. At the west side of the Bay at the Towne, is a head where small shippes and Barkes doe goe in within it, and lye there succoured for northerly windes, but great ships may not doe soo, they must anchor without in six or seven fathom.

From Saint Yves to Hartland poynt, the course is northeast seventeen or 18 leagues, betwixt them both about halfe way lyeth the poynt of Stoupert, to the eastwards of it lyeth Padstow in a Bay, where is a very good road in seven or eight fathom. At the west side of that poynt lyeth a suncken Rock under water, and upon the poynt a great high rock, to the westwards of that poynt towards Saint Yves, are many white sandy and chalky bayes alongst the shoare, whereby the coast there is very easy to beknowne.

Stoupert
Padstow.

Hartland poynt is a poynt that lyeth out, foure leagues north from it lyeth the Island Londey, which is somewhat a long Island, it lyeth most north and by west, and south and by east. At the east side of that Island men may ride for westerly windes in 14 and 15 fathom, but on the west side the ground is foule.

Hartlant
poynt.

Foure leagues to the eastwards of Hartland poynt eastsoutheast from the south end of Londey, lyeth the sound of Biddeford, being a broad haven, where many ships doe sayle in and out. A little within the mouth of the haven, it divideth it selfe into two rivers, upon the westermost on the starboard side lyeth Biddeford, and upon the eastermost on the larboard side lyeth a town called Barnestable.

Bidde-
ford.

Barnesta-
ble.

From the poynt to the northwards of Biddeford Haven, unto Ilfercombe the course is e. n. e. foure leagues, that is a haven where remaineth at low water 3 or foure fathom deepe. Before the haven is also good roade, in 8 or 9 fathom at halfe flood.

Ilfercom
be.

Eleven or 12 leagues to the eastwards of Ilfercombe, lie two little Islands, about two leagues north & south one from the other, called the Holmes, the northermost is called the Flatholm, and the southermost the Steepholm, betwixt Ilfercomb & the Holms (somewhat nearer the Holms then Ilfercomb,) lyeth a little towne called Mynehead, where many ships do lade.

Flat-
holm.
Steep-
holm.

In the fareway betwixt Ilfercomb & the Holmes, on the English side; on the one side, and the bankes on the Welsh side on the other side, in the middest of the channell it is deepe 30. 25. 20. 18. 16. and 15 fathom, the nearer the Holmes the shoaler water. When men come from the westwards within the Island Londey, then they may see the Land on both sides, to wit, of England and Wales. The English coast even from the C. of Cornwall to the Holmes is altogether cleane, but the coast of Wales is most all foule and shoaly, from the Island Caldy unto Bristow, with many bankes, sands, and riffes that lye off. The Holmes and the Island Londey lye west southwest, and east northeast, distant 19 leagues.

He that will sayle from Londey to Bristow, must run alongst by the English coast, untill that he come within the poynt of the Naes, for to avoyd Naes-sand, and then forth alongst through betweene the Holmes, leaving the Steepholme on starboard, and Flatholme on the larboard side. Men may alsoo with little ships, of small draught, sayle about to the southwards of the Steepholme, but it is there so shoaly, that there remaineth at low water no more then two fathom water. Under Steepholm men may anchor where they will, in foure or five fathom.

Road
under
Steep-
holm.

He that commeth off from the Naes, and is bound to Bristow, must stand over to the Steepholme, and run alongst to the northwards of it. It lyeth from the Naes east southeast about seven leagues.

For to sayle through between the Holms, the right & best fareway, you must sayle nearest the side of the Flatholme, there it is deepest, with an open wind men may sayle alongst soo neare by it without any hurt, that they may cast with a stone upon it. Within, or to the eastwards of the Holmes, lyeth shooting off from the eastland, a great shoale, lying off with a great tayle towards the west which (comming from the west) men might easily sayle within. For to avoyd it, you must set the Flatholme (when you are passed it) southwest from you, & keepe it standing soo, untill that you shall have sayled about a great league, looke out then for a little Island, that shall then at the east shorae lye neere about thwart from you, upon it stand two mils, and above upon the maine land standeth one mill. When the mill that standeth upon the high land commeth to the west end of that foresayd Island, you shall bee past the foresayd tayle of the Englisn grounds, and cannot sayle within it, goe then e. n. e. alongst by the Englisn grounds, which are flat, so that you may sayle alongst by them upon your lead in 3 or 4 fathom soo neare as you will. When then the mill that standeth upon the high land, commeth betweene the foresayd two mills which stand upon the little Island, then shall you bee altogether past the Englisn grounds, run then boldly towards the Englisn coast, and so close alongst by it, as you please, towards Passis or Portshut poynt. From the Flatholm to Passis poynt in the right fareway, it is deep 14 and 15 fathom. The Welsh side you must shun, and take very good heed of it, because it is very uneven and full of steep bankes that are needle to, which at many places do fall dry at low water, you may not come nearer that coast then in 12 fathom, for (sayling towards it) you shall have at one cast ten fathom, and before you can heave the lead againe, you shall sit fast, alongst from Flatholm till you come to Bristow. About Passis poynt men do anchor in Kings road which is between the poynt & the river of Bristow, nearest the river there is good clay ground in 8 or 9 fathom. They that are bound into the river are brought in by the Pilots. Men may from thence also sayle in alongst by the coast to the River of Severne, which is also like the River of Bristow, a faire River to sayle into.

Marks of the English ground.

Kings road.

For to sayle from Bristow to Londey, you must goe away from Passis poynt w. s. w. untill that the Flatholm doe come to beare southwest from you, or els untill that the three foresayd mills upon the south land doe stand a like farre one from the other, to wit, that which standeth upon the high land, doe stand in the middest betweene the other two, sayle then right with the Flatholme, & very close alongst to the southwards of it, and being passed it, goe then forth westsouthwest unto the Island Londey.

About 3 leagues to the northwards of Flatholm lyeth the Town Cardief in Wales, being a tyde-haven, before it is a good road, as well for ships that are bound to the westwards as to the eastwards, where men may lye landlockt allmost for all windes, to the eastwards and to the northwards of it lye many sands and bankes, which fall drye at low water, and so that they make men landlockt for northeast and by east winds. Hee that is bound into the roade before Cardief comming from the west, must runne in betwixt Flatholm and the poynt of Cardief, lying somewhat to the southwards of Cardief, and being come about the poynt, then to the northwards up alongst by the shoare unto the road.

Cardief

Close up to the poynt of Cardief, to wit, to the westwards of it, lye two little Islands, the one next to the poynt, is called Silye, and the westermost Barrey: Betwixt Silye and Flatholme lyeth a rock, southeast and southeast and by east from the poynt, which must bee avoyded when you will sayle through there unto the roade of Cardief. When it is high water you may sayle over all that which at half ebbe commeth not above water.

Silye.
Barrey.

About five leagues west from the poynt of Cardief lyeth the Naes, to the westwards off it the land falleth away first about northwest, then afterwards southwest, or southwest and by west, and soo maketh a great bay betwixt the Naes and Wormeshead, where there are very good roads for west, north, northeast, and east winds.

The Naes

From the Naes a little from the shoare lyeth a great banke, called Naessand, which lyeth off from thence west and

Naes-
sand.

and by ſouth, and weſtſouthweſt at leaſt five leagues into ſea. From Wormſhead likewiſe lyeth off a banck which is very ſteep, called Helwix, about foure leagues ſouthſouthweſt, and ſouthweſt & by ſouth into ſea, they that come from the eaſtwards, and will goe to ride in the Bay betwixt the Naes & Wormeſhead, runne alongſt cloſe by the poynt of the Naes, through betwixt the Naes & Naeſſand, likewiſe they that come from the weſtwards, and are bound in there, may run through cloſe alongſt by the poynt of Wormſhead and the Helwix, it is betwixt them both about an Engliſh mile broad. He that commeth out of the ſea, may come in betweene the foreſayd ſands or bancks, it is there wide and broad.

Wormſhead is a poynt lying farre out, appearing a farre off allmoſt like the Oldhead in Ireland, but it is above or under, and goeth ſloping downe towards the north, it hath in many places chalky ſpots, whereby it is very eaſy to bee known.

About 4 leagues to the weſtwards of Wormeſhead lyeth the little Iſland Caldy, where upon ſtandeth a white Tower, ſhewing off at ſea like a white ſayle, which is ſet there for to know the land by.

Betwixt this Iſland and the poynt of Wormſhead, the land falleth away with a great bay to the northwards, unto Carmarthen and Tinbuy, in this Bay it is all over good anchor ground for to ride. On every ſide of the Iſland Caldy men may alſoo anchor, and have ſhelter for all windes. A little to the northwards of Caldy lyeth a rane of ſuncken rockes, called the Wullox. Hee that will ſayle about to the eaſtwardes of the Iſland, to Tinbuy, may runne cloſe about by it, up to the weſtwards, through betwixt the Iſland and the ſuncken rockes, leaving them on the ſtarboard ſide, or elſe hee may runne alongſt alſoo to the eaſtwardes and to the northwards of the ſuncken rockes leaving them on the larboard ſide, and ſo then alſo to Tinbuy, and anchor there before the Towne in five or ſixe fathom. To the eaſtwardes and to the northwardes of the foreſayd rockes, it is alſo good anchorage in ſixe, ſeven, or eight fathom, it is there all cleane ground, and farre of ſhoale water. Men may alſo ſayle through to the weſtwards of the Iſland Caldy, (which is between the Iſland and the poynt of the maine land) to Tinbuy, but it is there narrow, yet cleane, and deepe enough.

The river of Carmarthen lyeth from the Iſland Caldy northeaſt and by north diſtant about foure leagues, the channell for to ſayle in there, lyeth in eaſtnortheaſt, on the eaſt or the ſouth ſide lyeth a great Banck which lyeth of farre from the ſhoare, and on the off-ſide goeth of flat. For to ſayle in there men may ſound it in alongſt by the eaſt or north ſhoare, untill they be over the ſhoaleſt of the barre, there is upon it at halfe flood about foureteen foot water, and being over the barre, it will be againe foure fathom deepe, or thereabouts, then they may run in forth by theyr lead alongſt by the ſouth ſhoare, untill they come within the river.

Foure or five leagues to the weſtwards of the Iſland Caldy, lyeth Saint Gawens poynt, the ſouth poynt of Wales, by ſome called the white poynt. About halfe an Engliſh mile ſouthſouthweſt from this poynt, lyeth a ſunken rock, called the Crow, whereof men muſt take heede.

Two leagues to the weſtwards of Saint Gawens poynt lyeth the haven of Milford, a broad and wide ſound, lying in at the entry northeaſt in, being come in within the poynts, men may goe up to the northwards, eaſtwards, and ſouthwards, unto divers places and roades. About by the north poynt, men may ſayle unto Daleroade, there it is good lying in three fathom & three fathom and a halfe at low water. When men come a little within the ſouth poynt in the open of Milford haven, there lyeth a little Iſland or rock like the Newſtone by Plymmouth, being paſt that a little, they may run to the ſouthwards, into a bay, where they may lye landlockt for all windes.

A little to the weſtwards of Milford-Haven lye two little Iſlands the ſouthermoſt is the ſmalleſt, called Stocholm, & the northermoſt Scaline. About two leagues north-northweſt or northweſt & by north from thence, lyeth the Iſland Ramſey, there betwixt them hath the land a great Bay, called the Broad-bay. Ramſey lyeth at the north poynt, and Scaline at the ſouth poynt of the Bay, there in alongſt the ſhoare is good riding for north, northeaſt, eaſt & ſoutheaſt windes, in 7. 8. & nine fathom. Upon the north poynt of this Bay lyeth a little Towne, called Saint Davids to the northwards of lyeth the coaſt of Wales alongſt northeaſt unto Cardygan. Scaline. Ramſey. Broad. S. Davids

About 2 leagues weſt and by ſouth to ſeawards from the Iſland Scaline, and 3 leagues ſouthwards from Ramſey, lyeth that little Iſland Graſholm, which is a round cleane rock, & about foure leagues of from it lye alſo two little Lands, which are fowle, called the Smalles. The lying of them, with the dangers there of, you may reade in the deſcription of Ireland. Graſholm. Smalles.

On the northweſt ſide of the Iſland Ramſey lyeth the Biſhop with his Clearks, theſe are rockes that lye of to the northwards and ſouthweſtwards of that Iſland a good way to ſea. About five leagues northweſt or ſomewhat northerly from Rameſey lyeth another great rock, called Maſcus, which is all round about foule, with many ſuncken rocks. He that commeth to ſaile thereabouts, or to lye by, muſt take very good heed of them. Biſhop with his Clearks. Maſcus.

The Iſland Ramſey, or the north poynt of Wales, and the ſoutheaſt poynt of Ireland, lye about eaſtſoutheaſt, and weſt northweſt diſtant 16 leagues.

Of the Tydes and Courſes of the Streames.

In Mounth Bay, and at the Lands end of Engand, a weſtſouthweſt and eaſtnortheaſt moon maketh high water.

In Silly a ſouthweſt and by weſt moone maketh full ſea.

A ſeaboard of Silly in the channell likewiſe a ſouthweſt and by weſt Moone.

In the entring of the channell a ſouthweſt and northeaſt Moone.

From Silly to the Lizard the flood falleth northeaſt, & the ebbe ſouthweſt.

Betwixt Silly and Londey the flood falleth northeaſt, & the ebbe ſouthweſt.

In Silly a ſouthweſt and by weſt Moone maketh high water.

On the coaſt of England betwixt the Cape of Cornwall and Hartland poynt a weſtſouthweſt, and weſt and by ſouth Moon maketh high water.

Thwart of the Iſland Londey a weſt and by ſouth, but on the Iſland, an eaſt and weſt Moone.

At the Iſland Londey, and at the Holmes, an eaſt and weſt Moone maketh high water.

At Briſtow within, a weſt and by north Moone maketh full ſea.

At Mildford haven an eaſt and by north, and weſt and by ſouth Moon maketh high water.

In the channel of Briſtow betwixt Londey & the Holmes, the flood falleth e. n. e. and the ebbe weſtſouthweſt.

Within the Holms towards Briſtow, the flood falleth northeaſt and by eaſt, and the ebbe ſouthweſt and by weſt.

Betwixt Londey and Mildford, the ſtreame falleth northeaſt, and northeaſt and by eaſt.

Of the Depths.

Men may ſee on Silly the ſouth ſide in 52 fathom, & the ground there is ſtony, with ſome red ſhels.

The lands end of England, men may ſee alſoo in 25 fathom.

Silly may be ſeene on the north ſide in 45. 46. and 48

fathom, there the ground is oasy; with some little stones amongst it.

When men are to the northwards of Silly, it sheweth first in two Islands, upon the eastermost they shall see a tower or little castle, to the eastwards of the 2 Islands, they shall see also two great hilly rockes, and to the westwards three high black rockes.

Westnorthwest and west and by north ten or eleven leagues from Silly, the ground is oasie and soft that men can scarce get any of it upon the lead; there come some little shels amongst it.

Betwixt the Lands end of England and Londey in the fareway, it is 45 fathom deepe, the land of Cornwall, men may see in 44 fathom.

Three or foure leagues without the land thwart of Saint Yves, Stoupert, or Padstow, the ground is sharpe and rocky, but neerer the land it is all sandy ground.

Betwixt S. Yves and Hartlands poynt are many white chalky hills alongst the coast, especially neere by Stoupert or Padstow, whereby this coast is to be knowne.

In the channell betwixt the Holmes and Bristow, it is deep 12. 13. and 14 fathom, and men may see the land on both sides.

Upon the coast of Wales about Milford, and to the northwards of it, men may see the land in 42 and 45 fathom.

Courses & Distances.

From the Lizard to the Lands end westnorthwest 9 or 10 leagues.
From the Lands end to Silly w.s.w. 8 leagues.
From the Lizard to the Gulfe, the course is west and by north. 10 leagues.
From the Lands end to the Gulfe, the course is southsouthwest 3 leagues.
From the Gulfe to Silly west 5 leagues.
From Silly to the Caskets east, somewhat southerly 55 leagues.
From Silly to Ushant, the course is southeast and by south 35 leagues.
From Silly to C. de Finisterre, south and by west westerly 150 leagues
From Silly to Cape Cleare in Ireland northwest and by north 46 leagues.
From Silly to Waterfoord north, & by west 40 leagues.
From Silly to the C. of Cornewall northeast 9 leagues.
From the C. of Cornwall to S. Yves east and by north 5 leagues.
From S. Yves to Stoupert poynt, northeast and by east 9 leagues.
From Stoupert to Hartland poynt northeast and by north 9 leagues.
From S. Yves to Hartland poynt n. e. 18 leagues.
From Hartland poynt to the Island Londey north 4 leag.
From the C. of Cornwall to Londey northeast and northeast and by north 25 leagues.
From the C. of Cornwall or Milford in Wales northnortheast 32 or 33 leagues.
From Silly to Milford northnortheast, somewhat easterly 46 leagues.
From the Cape of Cornwall to the rock Tuskar north and by west 40 leagues.
From the Cape of Cornwall to Waterford northnorthwest 40 leagues.
From the west end of Londey, to Biddeford eastsoutheast 5 leagues.
From Biddeford to Ilfercomb e. n. e. 4 leagues.
From Londey to the Holmes e. n. e. 20 leagues.
From the Steepholme to the river of Bristow northeast somewhat easterly 12 leagues.
From the Steepholme to the Naes westnorthwest about 7 leagues.
From the Naes to S. Gawens poynt west, somewhat northerly 13 leagues.
From S. Gawens poynt to Milford-haven northwest & by north 3 leagues.
From the Island Scaline to Ramsey northnorthwest 2 leagues.
From Londey to Milford north & by west and northnorthwest 12 or 13 leagues.
From Milford to the Cape of Cornewall southsouthwest 32 leagues.
From Milford to Silly southsouthwest, and southwest & by south 40 leagues.

Heights.

The south side of Silly lyeth in	50 degr. or a litle more.
The Cape of Cornwall lyeth in	50 degr. 25 min.
Londey lyeth in	51 degr. 13 min.
The Holmes lye in	51 degr. 30 min.
Milford in	51 degr. 46 min.
The Island Ramsey in	51 degr. 50 min.

How these Lands doe shew themselves at Sea.



Thus sheweth the Lizard when it is 5 or 6 leagues east and by north from you.

Mounts Bay. The Lizard.



Thus sheweth the Lizard being east from you 4 or 5 leagues.



Thus sheweth the Land betwixt the Lizard and the Lands-end, when the Lizard lyeth about east and by north, and Mounts-bay north from you.

Lands

Lands-end n. n. w. Mounts Bay n. e. by n. and n. n. e.



Thus ſheweth the Lands-end, and the land to the eaſtwards of it, when it is northnorthweſt, and Mounts-bay is north-eaſt and by north, and northnortheaſt from you, being a league from the land.



The Lands-end ſheweth it ſelfe thus, when you come in right within out of the ſea.

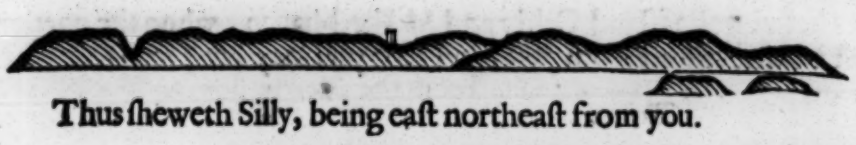


The Lands-end being eaſt from you ſheweth thus.

Eſt. The Lands-end of England.



Thus ſheweth the Lands-end when it lyeth ſoutheaſt and by ſouth ſeven or eight leagues from you, and the round Hill to the northwards of it eaſt, then you may even ſee the low land betwixt them both.



Thus ſheweth Silly, being eaſt northeaſt from you.



When Silly is ſoutheaſt from you, it ſheweth thus.



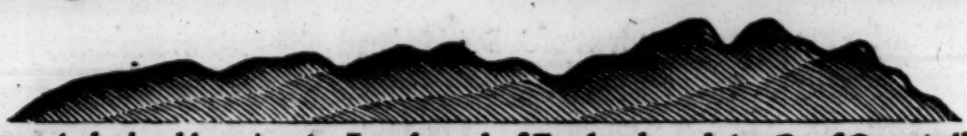
When Silly is eaſt 5 or 6 leagues from you it ſheweth thus.



Silly, being ſouthweſt from you, ſheweth thus.



When Silly is ſoutheaſt and by eaſt from you, it ſheweth thus.



Thus ſheweth the land betwixt the Lands-end of England, and the C. of Cornwall, or the Iſland Breſans, when you are on the Back-ſide of the Lands-end.



Thus ſheweth the C. of Cornwall, when it is eaſt and byſouth from you, ſo farre that you may but even ſee it from the poop.



Thus ſheweth the land betwixt the C. of Cornwall, and S. Yves, when it is about 4 leagues from you.



Thus ſheweth the land, when you are before or thwart of S. Yves, about five leagues without the land.



To the weſtwards of Stoupert ſheweth the Land thus, when you ſayle alongſt by it 2 or 3 leagues without the Land.



The Land to the eaſtwards of Padſtow or Stoupert ſheweth thus, when it is 2 leagues eaſt and ſouth from you.



The Land of Stoupert or Padſtow ſheweth thus, when you ſayle alongſt by it, 3 or 4 leagues without the land.



When the Iſland Londey is north from you, it ſheweth thus.



When the Iſland Londey is n. n. weſt from you, it ſheweth in this forme.

The



Thus ſheweth Ilfercomb, when you are right before the entry of it cloſe by the Land.



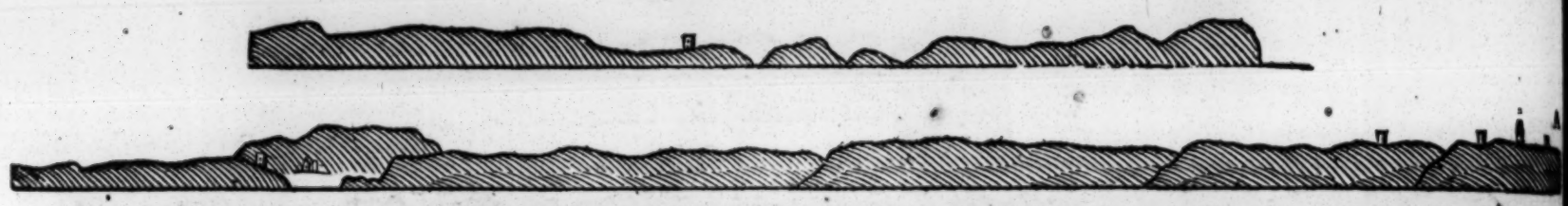
Thus ſheweth the Coaſt of England betwixt Ilfercomb and the Holmes, whem you ſayle alongſt by it.



Thus ſheweth the Land of Wales from Cardief to Wormeſhead.



Thus ſheweth the coaſt of Wales betwixt the Iſland Caldy and Milford-haven, when the northermoſt is northnortheaſt, and the ſouthermoſt is eaſtſoutheaſt from you, and that you may but even ſee it from the poope.



The Land betwixt Tinbuy and Milford ſheweth it ſelfe thus, when you ſayle alongſt by the Land, as is pourtrayed in the 2 figures, as the A A belongeth one to the other: the ſpire of the tower of Tinbuy is very white.



The Land from Milford-poynt unto the poynt of S. Davids-head, ſheweth as is pourtrayed in theſe 2 figures.



From Milford to Tinbuy, men ſayle alongſt by the coaſt, about 4 or 5 points it is moſt plaine Land, like ſand-hils. About two leagues to the weſtwards of the poynt of Tinbuy, ſtandeth a Spire tower, with 2 other ſmall flat little towers more, whereby the coaſt thereabouts is eaſy to be knowne.

The ſixth Demonſtration,

Where in

The Southeaſt and eaſt coaſt of Ireland is deſcribed betweene Corckbeg and Hedenhoo or Houth.

FRom the Lands end of England to Waterford, the courſe is northnorthweſt with that courſe you ſhall fall right with Waterford. But from Silly to Waterford, the courſe is north and by weſt, ſomewhat northerly forty leagues: betwixt both it is all oaſie and ſoft ground. Nine or ten leagues in the offing from Ireland lieth a ſand banck of forty fathom deepe, where commonly fiſhermen lye to fiſh, that is a certaine mark of the diſtance of the land, when you finde it in cleare weather, and when there is good ſight, then you may ſee the high mountaine of Dongarvan.

The hill of Dongarvan.

If you ſayle from the Lands-end of England with a north weſt courſe 43 leagues, ſoo ſhall you fall before the Liver of Corckbeg, it is there a good way upwards with a low water 7. 8. & 10. fathom water.

Corckbeg.

Foure leagues to the eaſtwards of Corck-haven lieth an Iſland, called Ballecotton, within it men may ride for

Ballecotton Iſle.

weſterly and ſoutherly windes, in foure, five, or ſix fathom. Corck & Iochull lye eaſtnortheaſt and weſtſouthweſt, diſtant ſeven or eight leagues.

The haven of Iochull is a broad haven, where men muſt goe in at high water, by the eaſt land it lyeth in northweſt and northweſt and by north. The weſt ſide is a ſandy ſtrand al alongſt to the towne.

Iochull.

About a league ſouth and by weſt from the havens mouth of Iochull, lyeth a little Iſland called Chappell: under it on the eaſt ſide is a good road. He that commeth before Iochull at a low water, may goe under that foreſayd Iſland to ride there, and ſtay for the laſt quarter flood, then there is foure fathom water upon the banck. At the weſt poynt of the Havens mouth lyeth a rocke within it. About halfe wayes to the towne ſtandeth a Priory, before it men may ride, they may alſo edge over to the eaſt land, and then run up the River.

Chappell Iſle.

Within

De Zuyd Ooſt zyde
Van
YERLAND
Van Dubling tot aen
t'Eylandt Corkbeg

Corckbeg
Karre Quin oſte
C. de Quin
Iochul al:
Iouchal
Balcotton
Cotton ile
Capel ile
t'hoge landt van Ardmore
t'hoge landt van Dungarvan
Ardmore Caſtel
Ardmore point
Dungarvan
C. Dongy
VERLAND
Roſſe
Withorſh
Stookſtun
Waterford
Clockrood
Ytree
Dunbrodi Abb
Balihack
Duncanon
Bumhil
Bannough
Mablinhaven
Balategh Caſtel
Saltes
Kimbeg
Blacrock
Carnesort
Caſtach
Sjakum
Kamey
I. Smeals

Duytsche mylen 15 in een graadt

Spaansche mylen 17 ½ in een graadt

Engel. en Fran. mylen 20 in een graadt

ADJACENTES PARS.

CATERLAGH.

DVBLIN

FORD.

Dubling

Klontarf

Ringsendt

Suycker broodt

Dalke

Sondt van Dalke

Bertoen rede

Mierholm

Braa

Brahed

Dalke

Wijngaers

Vlacke hoeck

Glasgarman point

Chappelouden

Arkeloo

Trochil

Glasgarvick

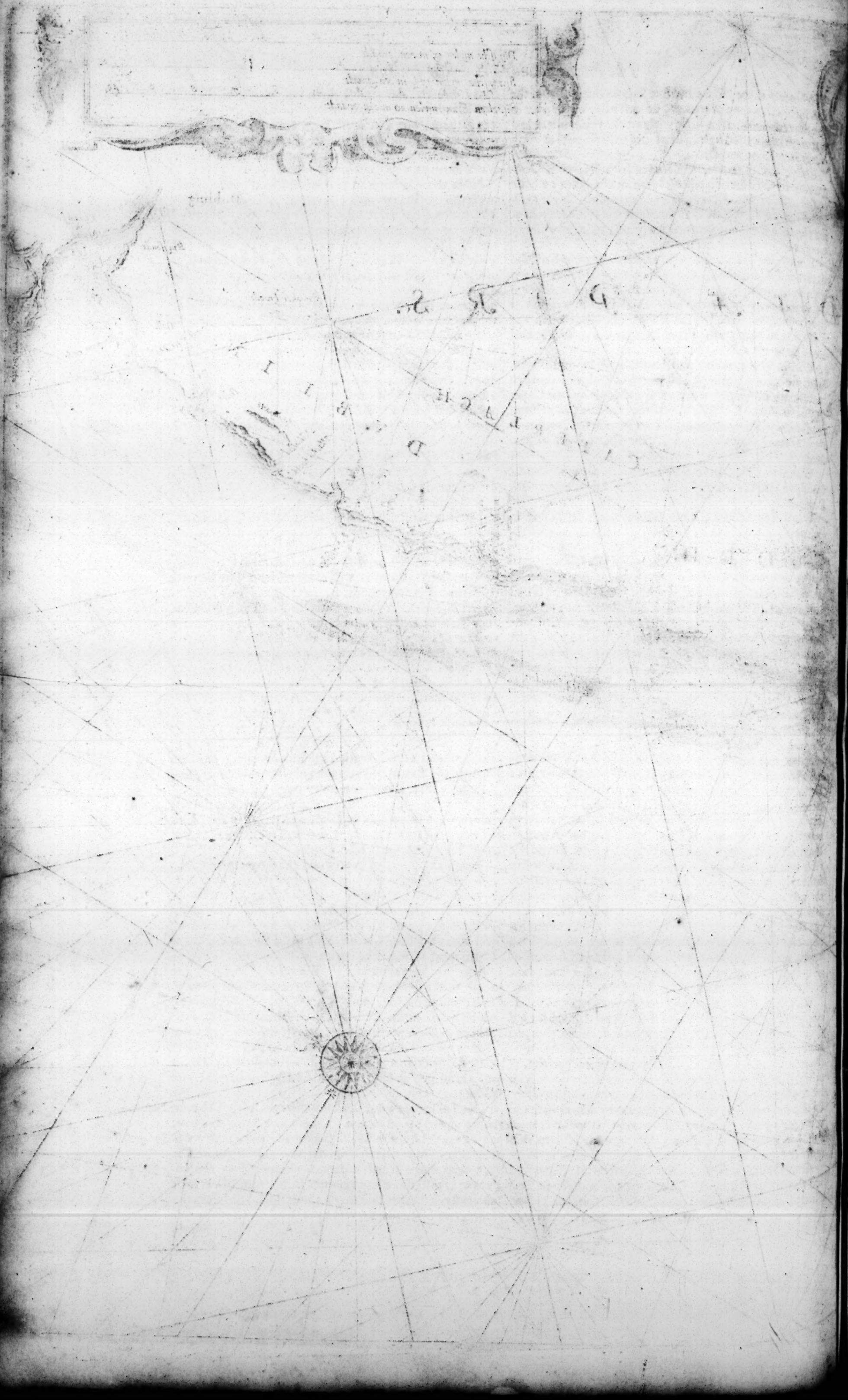
Carickgon

Glasgarmen

Muddel gronden

Zuyd gronden

Oyd gronden



Within it is three, foure and five fathom deep. From the eaſt ſide lieth a rane of rockes, at leaſt halfe wayes over in the havens mouth, a little without the rocks it is at low water no more then five or ſixe foote water, but at high water it is deepe enough.

Foure leagues to the eaſtwards of Jochull, lyeth Dongarvan haven, betwixt both lyeth an out point; a little to the eaſtwardes of it ſtandeth a high blacke Tower, called Ardimore, which may bee ſeen wel foure leagues at ſea, within it is a bay, which is a good roade for weſterly windes in ſeven or eight fathom.

Dongarvan is a narrow tyde-haven, the mouth off the haven is ful of rockes, and at lowe water it falleth drye, men muſt goe in there at high water, & runne in through betwixt the rockes, it lyeth in northnorthweſt, within it is deepe enough. The towne Dongarvan lyeth upon the weſt ſide of the haven. From Dongarvan to Waterford are eight leagues.

Within Dongarvan, northnorthweſt landwards in, lyeth the mountaine of Sleges, which men doe cal the high mountaine of Dongarvan, or Cape de Quin, or Caray Quin, it ſhewed it ſelfe with three exceeding high hommockes, farr above all other landes thereabouts, men may ſee it at ſea alongſt a great part of the ſouth coaſt of Ireland.

When you ſhall have that mountaine northnorthweſt from you, and ſayle in right with it, you ſhal fall right with Dongarvan.

When you ſhall have it north from you, and ſayle in right with it, then you ſhall fall with Iochul; being northnortheaſt, then you ſhall fall with Corck, but when it ſhall be n. w. and ſo run in, you ſhall fall with Waterford.

The haven of Waterford lyeth about five leagues to the weſtwardes of the ſ. eaſt poynt of Ireland, being called Carnaroort, the coaſt betwixt both lyeth eaſtnortheaſt and w. ſ. w. and ſheweth it ſelfe in the offing, within the land, with high hilles two and three double one above the other, but by the ſea ſide it is all low land, where you may ſee many flat Towers upon it, as you ſayle alongſt by it. The eaſt poynt of the haven is a low rock poynt, but it is cleane, upon it ſtandeth a high white flat Tower, called the Tower of Waterford, which you may ſee farre off at ſea, & is a perfect mark to know this haven by, there ſtand many more flatt Towers to the weſtwards alongſt the coaſt, but this is better to be ſeen then all the reſt, becauſe it is white and higher then the other. The weſt poynt is a high and fowle poynt, there lyeth a ſhoale ſouthſoutheaſt off into ſea, from it the channel is broad and cleane without it, it is eleven and ten fathom deep, & in the havens mouth ſeven fathom, and ſomewhat further in ſixe fathom, it lyeth in north and north and by weſt, within this river within the eaſt poynt is a good roade in foure or five fathom, a league within the rivers mouth there lyeth on the weſt ſide a ſteepe poynt, from thence beginneth a ſhoale lying to the northwards alongſt the ſhoare unto the ſteep poynt of Paſſage, and ſhooteth over from that poynt with a tayle, towards the eaſt ſhoare. Paſſage is a village where men paſſe over, lying on the weſt ſide of the river, a little to the northwardes of the foreſayd ſteepe poynt.

Betwixt that village, and that poynt on the weſt ſide is a good roade very fit as wel for them that are bound out, as for them that are bound up. In ſayling up you muſt take heede of a little ſhoale that lyeth off by caſtle (ſtanding on the eaſt ſide of the river) ſomwhat thwart over, the River downwards, at high water there is no more then two foote water upon it, a man that looketh for it, may ſee it, it is alſo flat that a man may ſound it. About halfe a league northwards up the River from Paſſage, there goeth another River weſtwards up to Waterford.

About halfe wayes betwixt the haven of Waterford and the poynt Carnaroort, lye 2 little Iſlands about half a league from the ſhoare, called Saltees, the ſouthermoſt is the greateſt and lieth diſtant from the Tower of Waterford, directly eaſt almoſt three leagues. Betwixt theſe two Iſlands you may ſayle through in five, ſixe and ſeven fathom, but you muſt keep neereſt the ſmalleſt or northermoſt Iſland, for to avoyd ſome ſuncken rockes that lye at the north end of the great Iſland, and at low water are drye.

From the northermoſt or ſmalleſt Iſland of the Saltees towardes the maine land, lyeth off a ledge of rockes where men were wont to goe over on foote, but now may ſayle over. For to ſayle betwixt the Saltees and the main land, you muſt leave two thirds of the diſtance of water from the Iſlands; and one third part from the maine, and you ſhall have at low water about two fathom deepe.

About a half league without the ſouthermoſt Iſland of the Saltees, lyeth a rock above water, called Kinbegh, and ſ. weſt about ſo farre from it, & ſ. & by weſt from the ſouth end of the Saltees lyeth a ſuncken rock, called Kimor, of the bigneſſe of a ſhip, it cometh with halfe ebbe even above water, it is ſo ſteepe that a man may lie with a ſhipps ſide againſt it, and have 14 fathom water, ſo that a man (without any danger) may ſayle alongſt by it, as neere as he will. A man may alſo (if need require) ſayle through betwixt Kinbegh and the greateſt Iſland of the Saltees, but a ſeaboard of all is beſt and ſecureſt. Kinbegh. Kimor.

To the eaſtwards off the rock Kinbegh, ſoutheaſt from the greateſt Iſland of the Saltees, lye alſo ſome ſuncken rockes called the Frailes, which may be ſeen at low water, there men may alſo ſayle through within them Northeaſt from the Saltees lye alſo rockes, the ſouthermoſt is called the Tuns, and the northermoſt the north rocke. The Frails. Tuns & north-rock.

Northnortheaſt from the greateſt Iſland of the Saltees, or from Kinbegh, and ſ. weſt and by ſ. from Carnaroort, lyeth one rock above water, called Blackrock, that is cleane and cleare round about, ſo that a man may ſayle round about it freely, without feare of danger. But a quarter of a league eaſtwards from it, lyeth a ſuncken rocke called the Barrel, of that a man muſt take heed. Black-rock. Barrel.

Under the Iſlands of both the Saltees, a man may ride, under the greateſt at the n. weſt ſide neereſt the north end: the marke or knowledge of the road is, a black rock like a boat turned upſide downe, right againſt that you muſt anchor in ſeven, eight or nine fathom, there it is good ſand ground, and landlockt for an eaſtſoutheaſt, ſoutheaſt and a ſouth winde, a ſouthweſt winde bloweth alongſt the ſhoare. If you anchor neerer the ſhoare in 5 fathom or there about, there it is rough ground. Road under the Saltees.

Under the ſmalleſt Iſland a man may ride at the eaſt ſide in 7 or 8 fathom, ſo that the north poynt of the Iſland lye n. n. weſt from you, there you ſhall lye neere the landlockt for ſ. weſt and n. weſt windes.

From the point of Waterford the ſhoare lyeth to the eaſtwardes, within the Saltees, eaſtnortheaſt, until Carnaroort, with many bayes, and all oaſie and black ſandy. A man being acquainted there, ſhould at a need in many places finde good roads, there is nothing that can hurt you except a little fowle place a little to the w. ward of Carnaroort cloſe by the ſhoare.

He that commeth out of Waterford, and will goe about to the ſouthwards of the Saltees, muſt not go more eaſterly then e. ſ. eaſt, for to go cleare of the fowle grounds, which lye to the ſouthwardes of the Saltees, and when the Saltees ſhall be north of him, then lyeth the courſe from thence to the Tuskar, directly northeaſt, or a little more eaſterly. But for to go alongſt without the Tuskar, a man muſt goe at leaſt northeaſt and by eaſt to goe cleare of him. For to avoyd the fowle grounds of the Saltees.

The Tuſkar is a great black ſmooth rock, lying like unto a ſhip turned up-ſide down, but is about twice ſo great, at the north ſide of it lye alſo two ſmall rockes under water. The Tuſkar lyeth from the poynt of Grenoore ſ. e. & by eaſt, and e. ſ. eaſt, diſtant one league: from the Saltees n. n. eaſt, foure leagues and a halfe, from Black-rock alſo eaſt northeaſt, two leagues and a halfe, and from the Lands end of England n. and by weſt. Tuskar.

Southeaſt and by ſouth about ten leagues from the Tuskar, lye two little Iſlands cloſe one by another, about foure leagues from Graſholme, called the Smaels, at high water & ſpring-tydes the water floweth over them, the northermoſt is called Scakum, & the ſouthermoſt is called Kamey, there lye off in the ſea 2 little ſhoals from them, the one north-northweſt and the other ſouthſouth-eaſt. Betwixt the Smals and Graſholme lyeth alſo a ledge of rockes, which at low water may bee ſeene above water. It is not without great danger to goe through betwixt them both, eſpecialy with calmes, by reaſon of the tyde that runneth very ſtrong there through; an eaſtſouth-eaſt moone maketh high water without the Smaels.

Smaels.

From the Tuskar eaſt and by ſouth about eight leagues, lyeth alſo a great rock, with many ſmall rockes round about it, called Maſcus. Hee that commeth from England and will ſayle towards Ireland, muſt take great heed there of, eſpecialy when as through weſterly or northerly windes he ſhall be driven a little to the eaſtwards of the courſe.

Maſcus rock.

For to anchor under the poynt of Carnaroort, comming from the weſt, you muſt take heed to come no neerer the ſhoare then in ſixe fathom, untill that you ſhall be paſſed by the high hill that lyeth to the weſtwards of the point, when you ſhall, have brought out the mill to the eaſtwards the length of a capſtane barre, then you may anchor in 9 fathom. There is very good riding.

Road under Carnaroort.

From Carnaroort to S. Margets bay, the ſhoare lyeth along northeaſt one league, it is betwixt both rocky and fowle, but the fowle ground lieth not farre off at ſea. For to keep cleare without it, you muſt keepe ſo far off the ſhoare that you may ſee the topps of the double land within about the cliffe land, and you need not feare, but if you come ſo neere the ſhoare that the double land within bee covered of the foremoſt cliffe land, or that thereby it get out of your ſight, you ſhall then ſurely ſayle upon the foreſayd rockes.

By S. Margets Bay upon the foreſayd land ſtandeth a Gentlemans houſe in the hills, when you have brought that with the mill that ſtandeth within, one in the other, then you may goe into the roade, and leave the rockes which lye above water halfe waies over the Bay, either on ſtarboard or larboard of you, anchor there in five or ſixe fathom, ſandy ground.

About ſ. ſ. e. from S. Margets Bay off at ſea, lyeth a ſuncken rocke, that at low water lyeth dry, called Caliach, Cali for to avoyd it, take heed unto theſe markes: when you come from Carnaroort, and have Black rock with the great Iſland of Saltees one in the other, and keep them ſo, and then ſayle on northeaſt, you ſhall goe right upon this ſuncken rock. For to goe to the ſouthwards of it then Mark keepe black rock with the ſmalleſt Iſland of the Saltees for C one in the other, or els for to goe to the northwards of liach it, keep Blackrock without or to the eaſtwards of the great Iſland, and then you ſhall not need to feare any danger of this ſuncken rocke.

From S. Margets bay to the point of Grenore, lyeth the coaſt northeaſt halfe a league.

The poynt of Grenore is not very high, but ſteep and Riffe flat on the toppe, off from it goeth a ſhoale about a quar- Gren ter off a league into ſea eaſt and by ſouth, off very rocks & ſtones, the which at low water falleth dry a good wayes off the ſhoare. The ſhips comming from the ſouthwards that are bound for Dublin or Waſhford, goe in commonly betwixt the Tuskar and the forefayd rockes off Grenore, for to come within the banck or ſands. Oftentimes they goe into Waterford for to hire a Pilot to bring them up. For him that will be his owne Pilot, wee will deſcribe all the markes that are to be taken heed of, as well for to ſayle into Grenore, as alſo into the deep or haven of Waſhford, as they are now at this time, and hereby doe adviſe men that they doe not alwayes continue ſo, becauſe by reaſon of the floods, the channell doth ſhift, and ſtretch it ſelfe out more northerly, and alſo waxeth deeper.

Comming out of the ſea about a league or two neere unto Grenore, you ſhall ſee the high ragged double land high above the poynt of Grenore, which (as is aforeſayd) is not very high, but flat on the top. By that ſayd high ragged double land within, men do know the entrance off the channell of Waſhford. When men doe come from the ſouthwardes and the eaſtwardes. When you have ſight off the poynt off the Grenore, you may boldly goe right with it, untill that ſayd double land doe ſhew it ſelfe, by eſtimation, but a mans length above the poynt off Grenore, as ſheweth this figure.

The high land over the poynt of Grenore.



The ſtat foore land of Grenore.

Then are you farre enough from the ſhoare, not to bee in any danger of the ſhoale of Grenore: Or els you may fit you ſelfe that you come no neere the ſhoare then in ſixe or ſeven fathom: but yet for need a man may borrow off the ſhoale in five fathom, or foure fathom & a halfe, but you muſt alſo take heed that you goe not ſo farre off from it, that you have more then eight or nine fathom depth, ortherwiſe you ſhould come to neere the banck that lyeth to the northwardes off the Tuskar, which on the inner ſide is very ſteepe and needle too, upon it is no more then twelve foot water, and cloſe by it ten fathom deepe. If that you keepe the foreſayd ragged high land (as is before ſayd) a mans length above the land off Grenore, and ſo ſayle to the northwardes, ſo long untill you bring that ſame high land without or to the northwardes off the ſteepe poynt off Grenore, then are you yet right againſt the ſhoale & muſt yet ſayle to the northwardes, keeping the mill that ſtandeth next unto the poynt of Grenore, ſo that you may ſee the top off it even right over the ſteepe poynt off Grenore. When you keepe it ſo, you ſhall not be in any danger off the ſhoale or riffe. Then as ſoone as you ſee a caſtle (which ſtandeth a little without the ſtrand) come without the poynt off Grenore, then may you boldly ſayle towardes it, by your lead, into the Bay of Grenore.

Green-bay.

The ſayd mill ſtands upon the land off Grenore, a little within the land, that may ſerve for a mark for not to come too neere as well to the ſhoare as alſo to the ſhoale or riffe, for if you come not ſoo neere the ſhoare that you looſe the mill out off your ſight, but keep ſo farr of, that you keep ſight of it, then doe you keepe farre enough from the ſhoare, and from that rocky ſhoale or riffe. Then when the mill ſhall come to lye ſouthweſt & ſouthweſt and by ſouth from you, then you are even paſſed the ſhoale or riffe, go then n. w. and by weſt, and northweſt, according as the winde and tide ſhall be into the Bay of Grenore.

Or els you may obſerve another marke: Sayle on ſoo long north, untill that you ſee a long black houſe come out to the weſtwards of Grenore, upon the low land, the which ſheweth like a black rock upon the land: then you may luff on towardes the ſhoare in foure or five fathom alongſt by the riffe, and run in ſo untill that you get ſix or ſeven fathom, and preſently afterwardes ſhall be eight or nine fathom deepe, but then afterwardes is it ſhoale by little and little, as you come neere the ſhoare.

If you

If you have a large winde: then ſayle ſo long to the northwards untill you ſee another little black houſe come out without the point, ſayl then unto it, you ſhall (ſoo doing) have no danger of the riffe.

In the Baye it is ſhoale water, you may lye there ſo neere the ſhoare as you pleaſe, in ſix, five, foure, and alſo three fathom, and there you can get a Pilot to bring you to Waſhford.

For to ſayle out of the Bay of Grenore, you may run out ſo cloſe by the ſhoare, that you may ſee but the wings of the mill over the Foreland, and ſo goe on eaſt ſoutheaſt into ſea alongſt by the riffe, or according as the winde and tyde ſhall be, ſo long untill that you may ſee the roofe of the mill, then you may goe larger, and by little and little goe more ſoutherly, and then you ſhall ſee it ripple upon the riffe.

For to ſayle out of the Bay of Grenore towards Waſhford with a ſhip that draweth little water, you may boldly runne alongſt by the ſhoare, and ſayle through betwixt the Haenmans path and the Souder, that is a channell where at high water and ordinary tydes is eight foote water; but with a ſpring-tyde there is ten foot water.

The Haenmans path is a dry ſand, which maketh the ſouth ſide of the channell of Waſhford, lying off from the Souder.

The Souder that is the ſouth poynt of the maine land of Waſhford haven.

But if your ſhip goe deeper, then you muſt (ſailing out of Greenbay) goe further off from the ſhoare, for to come without the ſand that ſhooteth off from Haenmans path, yet you muſt alſo take heed that you goe not to farre there-off, for if you come ſo far off in ten fathom, you ſhall come too neere unto the banck that lyeth without, which is on the inner ſide very ſteep and needle too, therefore go no further from the ſhoare then in ſeven, eight or nine fathom, but comming ſomewhat more northerly about Haenmans path, then you may well goe off into ten and eleven fathom; alſo you may not come neerer Haenmans path then in ſeven fathom.

If you deſire to be upon the barre of Waſhford and to leave the ſhoale of Haenmans paths, to wit, to goe to the northwards, then take heed unto theſe markes: At the north ſide of the channell of Waſhford lyeth a high hill with a round hommock, which is to bee ſeen over the Foreland, and a little caſtle in the low land, a little above the ſtrand, appearing as if it were againſt the land; bring that round hommock a little to the northwards of the caſtle, and ſayle ſo in, but bring not the hommock within or to the ſouthwards of the Caſtle, for then you ſhould bee in danger of the ſand of Haenmans paths, unleſſe it were by neede, and with a bare winde, then you might borrow ſo neere to bring them one in another, and ſo to ſayle in, but it is beſt to keep them ſomwhat out one from another, to wit, the little Caſtle to the ſouthwards of the hommock.

If it ſhould happen that you could not ſee theſe foreſayd markes well, nor diſcerne them, then you may goe about the ſand of Haenmans paths by your lead in ſeven fathom without any danger.

For to know then when you are far enough ſayled to the weſtwards, or are paſt Haenmans path, and are open before the channell, you ſhall ſee in the ſouth-land a little Caſtle that ſtandeth about foure leagues in the land within the ſtrand, in the ſide of the high land of Waſhford, about ſouthweſt and by weſt from you, when that ſhall bee upon that poynt from you, and that it ſtandeth betwixt the two northermoſt little ſandhills that are upon the foote ſtrand of the Soudre (which is upon the ſouth ſhoare) then are you paſt Haenmans paths; ſayle in then upon the marks of that little Caſtle, and the little ſand-hils over the barre of the haven; there it is at high water about ſixteen foot deepe.

As ſoone as you are paſt the outermoſt flat at the poynt of Haenmans paths, you ſhall goe ſomewhat neerer to Haenmans paths, although it bee very ſteep, that the tyde doth not bring you upon the tayle of the north-ground where the maſt ſtandeth, that is a foremaſt of a ſhip that is there loſt, and lyeth there ſuncken into the ſand, by the fore-maſt the north grounds are very ſteep and needle to, but without and within very flat going up.

In this channell and upon the Barre an eaſt and weſt moone maketh higheſt water: but the flood runneth yet afterward a half tyde ſtrong by the channell to the northwards; ſo that when it is higheſt water in the channell and upon the Barre, yet runneth the tyde thwart over the channell, therefore a man muſt keepe him ſo neere to Haenmans paths, as is ſaid, that is the cauſe that tayle of Haenmans path is caſt up ſtill more and more to the northwardes, and that the channell now lyeth out more to the northwards then it was wont to doe: And yet hereafter it is like that it will ſtretch it ſelfe more to the northwards, ſo that the foreſayd markes (by all likelyhood) wil not continue certaine alwayes. Even as the flood after the higheſt water, runneth yet a halfe tyde or 3 houres ſtrong (in the channel) to the northwards, ſo alſo runneth the ebbe a half tyde to the ſouthwards after the loweſt water, but not ſo ſtrong as the flood.

Being over the ſhoaleſt of the Barre, you ſhall have three & a half, and foure fathom, and in the channell betwixt the north grounds and Haenmans paths againſt the maſt 5 fathom depth, runne in by Haenmans paths, all alongſt untill you come to the foot ſtrand, & then edge over to the north ſhoare, for to avoyd the grounds which lye to the weſtwards above the Soudre, you may borrow of the ſhoale on the north ſide by your lead, into ten or eleven foote, according to the draught of your ſhip. In the right deepe of this edging over, you ſhall have at high water, fifteene foot depth.

The marke of this edging over is a white little caſtle that ſtandeth on the north ſide of the haven in the valley of the Land, when that commeth over the ſteep poynt of the innermoſt Iſland to the two that lye by the north ſhoare, and ſeemeth to be about a mans length high, then you may boldly run in n. w. with it, untill that a little chappell within the Land, and to the ſouthwards of Waſhford (a little or about a cables length to the northwards of that other forenamed little Caſtle on the north ſide of that high ragged land, that hath ſerved for a marke to ſayle over the Barre) commeth over a black hommock that you may ſee upon the high land, a little to the ſouthwards of the Caſtle of Waſhford, when you ſhall have brought theſe marks one in the other, edge then over again to the ſouth land upon the marks, for then you ſhall be above the ſands of the Soudre: & with that courſe alſo ſhall not be in danger of the taile of the ſand that ſhooteth off from the point off Paſſage, which is on the n. ſide, but it is there broad & large, that a man may there turne to & againe, it is altogether ſhoale water, of 10 & 10 foot & a half at high water. Sailing up upon theſe foreſayd marks, you ſhall come about the diſtance of the ſhot of a Caſt peece without the caſtle of Waſhford to the ſouth ſhoare, ſayle then in alongſt by it, & keep on the ſounding of the ſhoare untill you come within the caſtle, there you may anchor, & ſhall finde there about 3 fathom water; For a man that is there unaquainted, it is beſt to anchor there, becauſe before the towne lye ſome ſuncken rock; he that will lye before the town, muſt (right againſt the kay, or the head of the market) go a good ways off the ſhoare, becauſe of a ſuncken rock that lyeth thereabouts, and go right againſt the weſt end of the towne, and anchor there in 3 fathom, or thereabouts.

To the ſouthwards of the ſands, that lye to the weſtwards or above the Soudre, goeth a dreeke through, there is more water then in the edging over to the northwardes of the ſands. The marke for to ſail through there, is: That you keep the higheſt hommocks of the high ragged land (behind Waſhford) right over the caſtle of Waſhford, but there can be nothing gotten by it, with ſayling through there, in regard you muſt nevertheles go over the ſhoaleſt, after that you are paſſed the ſands of Soudre,

dre, to wit, over the foreſayd depth of ten and 11 foot.

For to ſail out from Waſhford, with a ſhip that goeth deep, you may not lade deeper then ten foot, or ten foot and a half for to come over the foreſayd ſhoale; you ſhall then ſail about to the northwards of the ſhoale that lyeth within, or to the weſtwards of the Soudre, & goe in and anchor betwixt the ſhoale and the Soudre, there you ſhall be landlockt for all windes, except for the ſouthweſt winde you have little ſhelter, you ſhall therefore bring out your beſt anchor, in the ſouthweſt, and the other in the northeaſt, becauſe that the winds that come out of the ſouth w. over the land, doe not put you upon the north grounds. There at the Soudre, you may take in the reſt of your lading, it is a league from the towne.

If you wil anchor before the Barre of Waſhford for to ſtay for the tyde, you muſt anchor a little to the northwards of the Barre, & go off ſomewhat until you have 8 fathom, there it is cleane ſandy ground.

In the night there are two fires made upon the Soudre for the Fiſhermen for to come in by night, by the Haenmans paths, he that will ſayle in by them, muſt keepe the higheſt fire a little to the ſouthwards of the other, for to avoyd the north grounds.

Beſides the deepe alongſt by the Haenmans paths, the Fiſhermen have a little channell that goeth out cloſe by the north ſhoare, it is there about 6 foot deepe at high water.

Channell through the banks before Waſhford.

From the Barre of Waſhford a man may ſayle eaſt and by ſouth, and weſt and by north out and in through betwixt the banks into ſea, or out of the ſea, that is a large and broad channell.

For to ſayle from the Barre of Waſhford within the ſands through towards Dublin, you muſt keepe the ſounding of the ſhoare, and runne alongſt by it in ſixe, ſeven or eight fathom, you ſhall ſo ſayle alongſt about a cables length from the ſhoare, which is very cleane without any danger, ſo that any man (having but a little knowledge of the Land) may ſayle there alongſt by night, only you muſt take heed not to goe further from the ſhoare then in ſeven or eight fathom, for not to come foule of the bankes, which are on the innerſide very ſteepe and needle too.

When you have ſayled to the northwardes alongſt by the ſhoare, about two leagues from the Barre, you ſhall ſee three white ſpots or rockes in the ſand-hill, a little to the northwardes there of ſtandeth a peece of a wall, much like a pillar of a Church: Right againſt this pillar, a great Engliſh mile from the ſhoare, beginneth a ſand, called the Ruſch and Ramme, lying from thence alongſt the ſhoare to the northwardes, you may ſayle about it on both ſides, but it is beſt to keepe the ſhoare, and to runne through there within in ſixe or ſeven fathom, as is ſayd out of feare of the outtermoſt banckes, which are very ſteepe, and therefore cannot bee ſounded; Therefore men doe ſeldome uſe to ſayle there a ſeaboard of this ſand.

Right againſt this forenamed Ruſch and Ramme, the ſhoare maketh a Bay unto the poynt off Glaskarrick, when you are ſo farre as this poynt, then you are paſt the foreſayd ſand.

Poynt of Glaskarrick.

The poynt of Glaskarrick is a low poynt, a little to the northwards of it ſtandeth a caſtle.

Channell through the banks before Glaskarrick.

When you are without the banckes in the north channell, and deſire to come within the banckes, then keepe that caſtle (if you can get ſight of it) a little to the northwards of the low poynt, and runne boldly right in with it, unto the land, without feare of the grounds, there is a good channell, through the banckes; you ſhall not finde leſſe depth then 15 or 16 fathom, untill you come to the ſhoaling up againſt the ſhoare. This Channnell lyeth in northweſt.

For to ſayle from Glaskarrick to Dublin, run all alongſt by the ſhoare (which is ſomewhat full of Bayes) and keepe you (as before) in eight, ſeven, or 6 fathom. Two great leagues to the northwards of Glaskarrick lyeth a ſand, a great halfe Engliſh mile from the ſhoare, called the Glaskarmen, the ground is very uneven betwixt both. But nevertheles run through within that ſand & keep the ſounding of the ſhoare, but not ſoo far from it, that you come into ten fathom, for then you ſhould ſayle cloſe alongſt by the Glaskarmen, which is very ſteepe, and about two Engliſh miles, or a halfe Dutch mile long. Glaskarmen.

One Engliſh mile to the northwards of Glaskarmen lyeth the poynt of Arkelohead. Arkelohead.

Sayling through between the ſhoare and Glaskarmen, to the northwards, a man may ſee 2 poynts, to wit, Mizanhead and to the northwardes of it Wicklohead. If you keepe Wicklohead even within the poynt of Mizanhead, then you can take no hurt of the Glaskarmen. But if you would ſayle a ſeaboard of the Glaskarmen, then keepe Wicklohead a good wayes without the Mizanhead, and ſo runne alongſt a ſeaboard of it, and you can take no hurt of it: But if you keepe the poynt of Wicklohead but even without the Mizanhead, you ſhall not fayle to ſayle upon the Glaskarmen. Markes for to avoyd the Glaskarmen.

At the north poynt off Arkelohead lyeth a little ſtony ledge very ſteepe and needle to. A man muſt take good heed of it (comming from the northwards) and bound to the ſouthwards, and then muſt come no neerer it then in five fathom, towards the ſhoare lye ſome little rockes above water: when you come from the northwards; & thoſe little rockes are weſtnorthweſt from you, then are you paſſed it, to wit, to the ſouthwards of that ledge; & then you may againe borrow of the ſhoare, upon the lead, commonly men doe keepe ſo farre of the ſhoare, that they can take no hurt of the foreſayd ledge. Ledge at Arkelohead.

At the north ſide of the poynt of Arkelo is a faire ſand-bay, there is a good anchor ground, and all over good riding in 8, 7, or 5 fathom, in this bay are good ſtore of herrings caught. Baye Arkelo.

Right againſt Arkelo runneth alſo a channell through the banckes into the ſea. For to ſayle in there out of the ſea, looke out for a round hill within the land: bring that weſtnorthweſt, or weſt & by north off you, & ſayl then in there boldly, keeping it ſo. But if you bring the round hill weſt of you, and ſayle ſo in, you ſhall ſayle upon the poynt of the north groundes, it is in that channel about ſeven or eight fathom deepe. For to ſail into the channell before Arkelo.

About an Engliſh mile to the northwards of the poynt is the river of Arkelo but very ſhoale, at high water there commeth no more then ſixe foot water.

The coaſt of Waſhford unto Wickelo lyeth moſt north & by eaſt, a little more eaſterly: But he that will ſayle without alongſt by the banckes or ſandes, muſt not goe more northerly then northnortheaſt, for to avoyd the grounds which lye about Wickelo, 3 leagues off from the land. And to the ſouthwards the ſouth grounds lye ſcarce a league from the ſhoare, there not long ſince a pilot keeping bad reckoning run without the ſandes alongſt north and by eaſt, & ſayled thwart of Arkelo, behind a taile of ſand that lyeth off from the north to the ſouthwardes, & he loſt his ſhippe. Arkelo lay from them (when they ſat upon the ſand) weſt & by ſouth.

About two leagues to the northwards of Arkelo lyeth Mizanhead it is a black head. Betwixt Mizanhead & Arkelo in the fareway it is eight and 9 fathom deep, is it alſo betweene them both alongſt the whole coaſt, good anchoring and cleane ground. Mizanhead.

From Mizanhead to Wicklohead it is alſo 2 leagues, but this reach is ſhorter then the other to Arkelo. Wicklohead.

One Engliſh mile to the ſouthwards of the point of Wicklo, lyeth a little rock cloſe by the ſhoare, called the Wolf, it commeth at half-tyde above water, the Fiſhers boats run through within it, but it is not to be done with ſhipps. Wolfe.

Right to the ſouthwards of Wicklohead, ſomewhat further out then the poynt, lyeth alſo a rocky ſand, called alſo the Horſe-ſhoe, cloſe unto the poynt, about ſouth and by eaſt from it a man ſhould for need (when hee cannot do better) ſayle through there within it, but he muſt Horſe-ſhoe.

be

be very well acquainted with it, or els not well to be done; without, it is more certaine and beſt going off ſomewhat to deep. If you keepe the poynt of Brahead a little without Wicklohead, then you can take no hurt of it, or if you keep the high inner land, ſo that you may even ſee it above the land of Wicklo, and goe not altogether hidden behinde it, then you goe there without it in 5 fathom. The poynt off Wicklo is ſteepe & ſtony with a double top little hill, within ſtandetha little chappell, when you can ſee that through the ſaddle off the hill, then you are right againſt it, and have it on your ſide; the village of Wicklo lyeth to the northwards off the point in the Bay, there is a little haven, which at high water hath ten foot water.

In the Bay the ground is ſo hard & chindell, that the anchors doe not hold there, but without the Bay ſomewhat farre from the ſhoare, towards the Banckes, the ground is ſomewhat better.

Channel through the banks thwart of Wicklo. Thwart of Wicklo alſoo is a channell through the bancks for to ſayle that out or in, keepe the Caſtle of Wicklo, that you may ſee it open of the poynt, thereupon you may boldly ſayle out or in.

Fourteene Engliſh miles from Wicklo lyeth the poynt of Brae, a high ſteep ſtony poynt, & the high land there about on the ſea coaſt.

Betwixt Wicklo and Brae lyeth out a flat poynt with a little Fiſher village, called Nicaſtell, there (ſayling alongſt) you have foure, five and ſixe fathom deepe, but from the flat poynt unto the ſteepe poynt of Brae, it is wel 14 fathom deepe, the land lyeth there about north and north & by weſt.

Sugarloafe. Within the land lyeth a high hill, off faſhon like a Sugarloafe, that is the fartheſt in the land off the three hills, which they call the Vineyards, when you have them through one another, and are northweſt, and ſo keepe them, then may you boldly thereupon run through the banckes into ſea, or out of the ſea, by theſe markes you may come in within the banckes that is a very large and broad channell.

Thwart from that foreſayd Sugarloafe to the ſouthwards of Brae lyeth a bancke that is not deeper then 4 fathom, very ſtony and ſharp ground.

Brahead. Braehead is very ſteep, likewiſe alſo the ground by it, is 10 fathom deepe cloſe by the ſhoare, to the northwards of the poynt lyeth a little tyde-haven, there ſtand the houſes called Brae on the north ſide.

Hand Dalke. From Brahead to the Iſland Dalke (lying at the ſouth poynt of the Bay of Dublin) the courſe is n. and by w. 4 Engliſh miles, there betwixt both goeth in a bay.

At the n. e. ſide of the Iſland Dalke lie ſome rocks, lying alongſt the maine not far from it. Men ſayle within the Iſland through and leave al the rocks and the Iſland lyeth to ſeawards.

The ſound of Dalke. The Sound betwixt the Iſland Dalke and the maine land, is called the Sound of Dalke, it lyeth northnorthweſt, and north and by weſt through, it is 7, 8, and nine fathom deepe, men may anchor under the Iſland, neareſt the Land, there is good ſandy ground, or ſomewhat further in, there lyeth a round rock, neareſt to the maine land, there men may make faſt a Cable on it, & an anchor thwart of the channell, towards the other rocks, becauſe of the tydes, for the tyde runneth there very ſtrong through. A ſouthſoutheaſt & a ſouth & by eaſt winde bloweth there right in, but in regard it is there very narrow, there can goe no great ſea, with a ſoutheaſt winde you are landlockt of the Iſland, and a ſouth winde commeth off the maine land.

From the Iſland of Dalke, untill you are paſſad the village of Dalke, the ſhoare lieth northweſt and by weſt, before the village you have ſome ſuccour for a ſoutheaſt winde, the winde being more eaſterly, you lye in the open ſea. You lye there in 8 or 9 fath. the nearer the Iſland the deeper, the place is called the Berton road; you may not anchor further to the weſtwards then before the village: to the weſtwards of the village the ground is foule & ſharpe.

Berton road.

The north poynt of the Bay of Dublin, called Houth or Hedenho, is a very high poynt, it ſeemeth a farre off as if it were an Iſland, but it is faſt to the maine land with a ſmall and very low necke: To the northwards of it lye the Iſlands Yrelands-eye and Lambey, thoſe may bee ſeene (being to the ſouthwards of the poynt Houth, & being before the entrance of Dublin) over that foreſayd ſmall necke of Land. Houth.

From the Sound of Dalke to the Barre of Dublin, the courſe in n. n. w. the fareway it is deep 9, 8, 7, 5, and four fathom, how nearer the Barre the ſhoaler water. When you ſayle up, you muſt keepe the weſtermoſt Rocke that lyeth without at the Iſland of Dalke, a handſpikes length open of the Iſland, or the other rockes, and ſhall ſo come before the entrance, without having any let or hinderance of the ſand. Or you may ſayle more to the eaſtwards right towards the low land of the norther ſhoare, & then by your lead alongſt by it to the Barre.

If you come from the northwards, you may runne in cloſe about the point of Houth by your lead, and then all alongſt by the norther ſhoare, untill you come to the mouth of the Barre, there alongſt it is the deepeſt water, but towards Dalck it is ſhoaler. From the ſouth ſhoare runneth of a great tayle of ſand, almoſt unto n. ſhoare. To the northwards of it goeth the deep in. Upon that tayle a little within the poynt ſtands a beakon of a maſt, made by the Engliſhmen called the Paerſing. Paerſing.

Markes of the land. For not to come neare this foreſaid ſand, comming from the ſouthwards, looke out for the Iſland Yrelands-eye, keep that ſo, that you may but even ſee it over the low land cloſe after unto the high land of Houth, ſo you can take no hurt of that ſand. When the Tower of Saint Patrickes in Dublin which ſtandeth on the land ſide of Dublin, commeth right over that beakon the Paerſing, then are you yet right againſt the poynt of the ſand which ſhooteth out a good way to the northwards of the Paerſing. For to goe cleare of that, you muſt runne ſo farre to the northwards, untill the Paerſing commeth right over a little caſtle with three turrets, or little towers, which ſtandeth to the ſouthwards to the town, or when the Paerſing commeth betwixt that foreſaid little Caſtle & the towne, then are you above the poynt of the ſand, then goe in weſt and by ſouth untill you come over the ſhoaleſt of the Barre, there is at ſpring tyde 15 or 18 foot water, but at low water and neeptyde, not more then 6 foot, you may ſound it on both ſides. When you are over the ſhoaleſt of the Barre, then anchor within the ſand by the beakon in Poelbergh there it is at high water 4 fathom deepe. The marke of this road is, that you bring that afore written hill like the Sugarloafe (that here before is ſpoken of, and ſerveth for a marke for to ſayle by into the Channell of Wicklo) over an other lower hill, then are you in the beſt of the road, bring out your beſt anchor in the ſouthweſt, againſt the blowing of the ſ. w. windes, which ſometimes come powring downe there very ſtrong out of the ſ. w. over the high land, and the other in the northeaſt. At low water the ſands lie dry there round about the road. Road in Poelberg

Road by Klantarie. Men may alſoo anchor ſomewhat further in, at the north ſide of the ſound, right againſt a village called Klantarie in a pool, where at low water remaineth 9 or 10 foot water: but round about the ſhip (as it is in moſt places of the haven) it doth fall altogether dry, ſo that there a ſhip hath but even roome to winde up to and again. Men do moore there ſouth ſoutheaſt and n. n. w. A ſ. e. & n. w. Moone maketh there the higheſt water.

If the ſhips that come there be any thing great, they muſt ſtay in Poelbegh, cloſe before the Town it is very ſhoaly, and falleth at low water altogether dry: with an ordinary tyde men cannot come before the towne with a ſhip that draweth 5 foot water, but with a ſpring tyde with ſhips that draw 7 or 8 foot water.

At the north ſide of the river, a little further out then the town, right over againſt Ringſend, lieth a little Iſland, within it is a fit place to make ſhips cleane.

The ſands or bankes that lie alongſt this eaſt Coaſt of

Ireland from the Tuskar unto Dalke, are on the out-ſide, or on the eaſt ſide very ſteepe and needle too, ſo that men may not come nearer them then in 24 & 25 fathom, in 20 fathom men are cloſe by them, they are not deeper at ſome places then in one fathom, or one fathom and a halfe: but at the north end by Dalke, about two fathom and a halfe, and there fathom deepe, all ſtony ground, & lye on the off ſide alongſt n. n. eaſt, and ſ. ſ. weſt, at the north end they lie about 8 Engliſh miles from the land. If you are bound for Dublin, and will go without theſe ſands, run then ſo far to the northwards, untill you can ſee the little Iſland (Irelands-eye) without the point of Houth or Hedenhoo, run then right on to Houth or Hedenhoo, and then you ſhall take no hurt of the north grounds.

Marks for to ſayle without the banks

Of the tydes & courſes of the Streames.

Betwixt Corckbey, alongſt the Coaſt before Waterford into the poynt of Cornaroort, the Iſland falleth alongſt the Coaſt e. n. e. and the ebbe w. ſ. w.

At Waterford an eaſt and by north, and weſt and by ſouth moon maketh high water.

Without the land in the fareway betwixt Silly and Ireland, a ſouthweſt and by weſt moone maketh high water.

In the channell or entrance of Waſhford, an eaſt and weſt moone.

The flood runneth there to the northwardes, after high water a halfe tyde, & the ebbe contrariwiſe to the ſouthwards, a halfe tyde after low water, but not ſo ſtrong as the flood.

On the eaſt Coaſtes of Ireland to the ſouthwards of the bay of Dublin, a ſouthſoutheaſt and northnorthweſt moone maketh high water.

At Dublin a ſoutheaſt and northweſt moon.

The flood runneth from the Tuskar without the bankes alongſt betwixt Ireland and England northnortheaſt, & the ebbe ſouthſouthweſt.

On the Coaſts a ſouthſoutheaſt and northnorthweſt moone maketh high water.

The flood commeth here from the ſouthwardes, and alſo from the northwards, about the north part of Ireland, & meete one another about right againſt Carlingford, where they ſtoppe one the other. The ebbe contrawiſe falleth (to the northwards of Calingford) to the northwards, and (to the ſouthwards of Carlingford) to the ſouthwards.

Of the Depths.

From Corckbey to the eaſtwards unto Waterford men may ſee the land in 24 fathom, the moſt part of the ſouth Coaſt of Ireland men may ſee it in 35 and 40 fathom. In 35 fathom you ſhall not be farre from the land, therefore come no neerer Ireland by night then in 40 fathom.

Courſes and Diſtances.

From Corckbey to Waterford, the Coaſt lyeth moſt eaſt-northeaſt 10 or 20 leagues.

From Waterford to the Iſlands of the Saltees eaſt, but to goe about to the ſouthwards of them e. ſ. e. 3 leagues.

From the ſouth end of Saltees to Black-rock northeaſt and by eaſt 2 leagues.

From Blackrock to Carnaroort n. e. 1 league.

But to Grenore 2 leagues.

From the Saltees to the Tuskar eaſtnortheaſt, but from without the foule ground to the ſouthwardes of the Saltees northeaſt and northeaſt and by eaſt 5 leagues.

From Blackrock to the Tuskar eaſtnortheaſt 3 leagues.

From the Tuskar to Grenore northweſt and by weſt, & weſtnorthweſt 1 league.

From Grenore into Grene-bay firſt northweſt and by north, & then weſtnorthweſt 1 league.

From Greene-bay to the Barre off Waſhford, north & north & by weſt one great league.

From the Barre of Waſhford unto Waſhford about one league and a halfe.

From Waterford to Groſholm eaſt & by ſouth 21 leag.

From the Tuskar to the rock Maſcus eaſt and by ſouth 8 leagues.

From Tuskar to the rocks Smales ſoutheaſt & by ſouth about 10 leagues.

From Tuskar to the lands-end of England ſouth and by eaſt ſomewhat northerly 43 leagues.

From Waterford to the lands-end of England ſouthſouth-eaſt, but to Silly ſouth and by eaſt, ſomewhat ſoutherly 43 leagues.

From the poynt of Glaskarrick to the poynt of Arkelo north and by eaſt 4 great leagues.

From Arkelo to Mizanhead north and by eaſt, ſomewhat eaſterly 2 leagues.

From Mizanhead to the poynt of Wicklo north and by eaſt ſomewhat eaſterly 2 leagues.

From Wicklohead to the flat poynt by Nicaſtle north, 2 leagues.

From Nicaſtle to the poynt of Brae north, and north & by weſt 2 leagues and a third part.

From Wicklohead to Braehead north, and north and by weſt 5 leagues.

From Braehead to the Iſland of Dalke north & by weſt 2 leagues.

From Dalke to the Barre of Dublin northnorthweſt 2 leagues and a half.

From the Sound of Dalke to the poynt Houth northnortheaſt 2 leagues and a halfe.

The Bankes lye from the Tuskar to the northend northnortheaſt and ſouthſouthweſt.

From the Barre of Dublin to Holy-hill in the Iſland Angleſey eaſt and by ſouth 19 leagues.

From the Barre to the Town Dublin w. ſ. w. two leagues.

Heights.

Waterford, or the Tower of Waterford lyeth 52 degr. or a little more.

How theſe Lands doe ſhew themſelves at Sea.



The land a little to the eaſtwards of Kinſale ſheweth thus.



The land to the eaſtwards of Corck towards Jochull, ſhéweth in this forme.





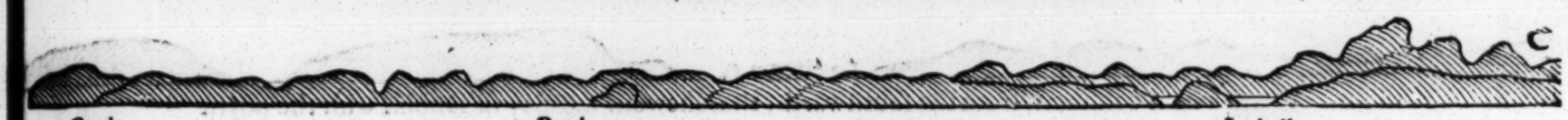
When you are to the eaſtwards of Corck not far from the land, and that the harbours mouth doth begin to open, then ſheweth the land as it is deſcribed in theſe two figures, at the AA, belonging one to the other, being neare the land it ſeemeth to be high land, but a far off (when you can ſee the high inner land, within Jochul over the cliffe land) it ſeemeth to be but low.



Theſe two figures belong at the BB, one to the other.



When you are before Iochull, or thereabouts, (two or three leagues from land) ſo that the high mountaine of Cape Quin be north and by weſt from you, then ſheweth the land thus, the double innerland is very high blew land, you may ſee it in cleare weather twelve or thirteene leagues off.

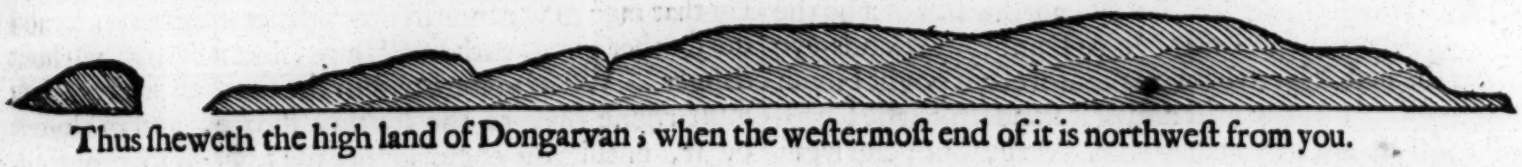




Theſe two figures belong at the CC, one to the other, and is the forme of the land betwixt Corck and Iochull.



The high land of Dongarvan ſheweth thus, being northnorthweſt from you.



Thus ſheweth the high land of Dongarvan, when the weſtermoſt end of it is northweſt from you.



Thus ſheweth it ſelfe the land about Waterford, and to the weſtwards, with the high land of C. Quin, or Cara Quin, when you come towards the land.



Thus ſheweth the Saltees, when they are 3 or 4 leagues weſt and by north from you.

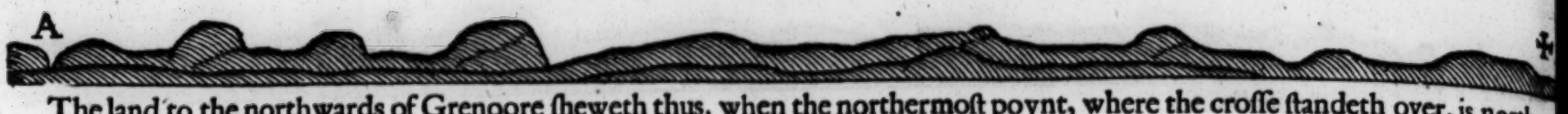


Thus ſheweth the land between the Saltees and the poynt of Grenoort when it is about 2 leagues from you.



The figure following is to bejoyned unto the former, the AA one to the other.

The



The land to the northwards of Grenoore ſheweth thus, when the northermoſt poynt, where the croſſe ſtandeth over, is north and by weſt about five leagues from you, and Grenoore ſouthweſt and by weſt, ſo farre that a man may but even ſee it from below, and then a man may ſee the Tuskar from the top in the ſouthweſt.

Sugarloafe. Brahead.

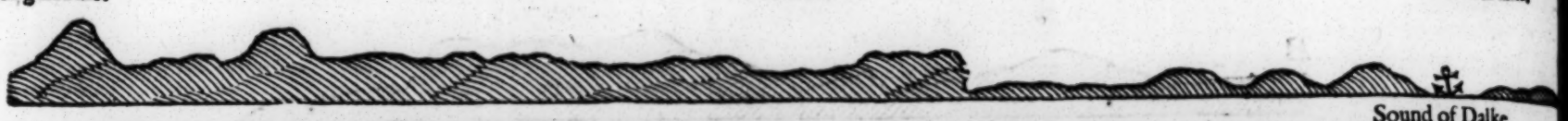


Thus ſheweth the coaſt of Ireland when as Sugarloafe is northweſt, and the poynt of Brahead northweſt and by north about ſeven leagues from you. When as Sugarloafe commeth northweſt and by weſt from you, then may you runne ſo in, over the north grounds through a broad channell of nine and ten fathom deepe.



When the Sugarloafe is thwart from you, it ſheweth with the high land within it, thus.

Sugarloafe. Braehead. Iſland Dalke.



Sound of Dalke.

Thus ſheweth the coaſt of Ireland betwixt the Sugarloafe and the Iſland Dalke, lying at the ſouth poynt of the Bay of Dublin, when a man is about Braehead, one or two leagues from the land.

Sound poynt of Dublin. Iſland Dalke. The poynt Houth. Iſland Lambey.



When a man commeth from the ſouthwards, thus ſheweth the Bay of Dublin with the poynt Houth, and the Iſland Lambey to the northwards of it.

The ſeventh Demonſtration,

Wherein is

Delineated the northeaſt Coaſt of Ireland betweene Hedenhoo or Houth, to Hoornhead.

THe n. poynt of the Bay of Dublin called Houth, is round about cleane, ſo that a man may anchor round about it. To the northwards of it lie the Iſlands of Irelands-eye & Lambey. Irelands-eye is the ſmalleſt, it lyeth betwixt the aforeſayd poynt Houth and Lambey: At the weſt ſide of it ſtandeth a little Chappel, right againſt it, you may ride. At the ſouth end lyeth of a ſtony riffe which muſt be avoided. Right over againſt that Iſland in the maine land lyeth a haven for ſmall ſhips, at a little town called Malcheall.

Irelands-eye.

Malcheall.

Under Lambey you may ride upon the n. ſide for a ſoutherly winde, in 12 and 13 fathom, but for a ſea winde, you muſt ſhift unto the weſt ſide by a Gentlemans houſe, and anchor there, but it is not very good lying there, becauſe alwaies there commeth in a great ſea.

Lambey.

About 6 leagues n. w. and by n. from Lambey, lyeth the haven of Drodagh, betwixt them both (neareſt Lambey) cloſe by the land lie rocks, called the Skires. About 2 miles to the northwards of Lambey lyeth a great rock called Rock a Bill, you may run round about it on both the ſides.

Drodagh hath a narrow crooked haven, which is not good to come into without a Pilot, or ſome one that is well acquainted with it.

Drodagh

Foure or 5 leagues to the northwards thereof lyeth the haven of Dondalk, which is very ſhoale, and little uſed, at low water a man may go over a foot.

North and by weſt about 11 leagues from Lambey, ſeven leagues to the northwards of Drodagh, and two leagues from Dondalk, lyeth the haven of Carlingford: the north poynt of that haven is ſomewhat foule and rocky, but you may goe in about it by your lead: the ſouth poynt is very foule with rocks and ſuncken rocks, which you muſt ſhun, and runne in by the northerne ſhoare: Some ſay that men may runne in through betwixt the rocks and the ſouther poynt with ſmall ſhips, but it is not without danger. When you are within the ſuncken rockes, you muſt runne over to the ſouther ſhoare, and in alongſt by it, untill you come before the town of Carlingford, and anchor there in ſix, ſeven, or eight fathom, ſo ſhallow as you will; you may ſayle in upon the oaſe and ſave a ſhip without anchor or Cables. Green-Caſtle lyeth at the northeaſt ſide of the haven, 2 miles from Carlingford.

Carlingford.

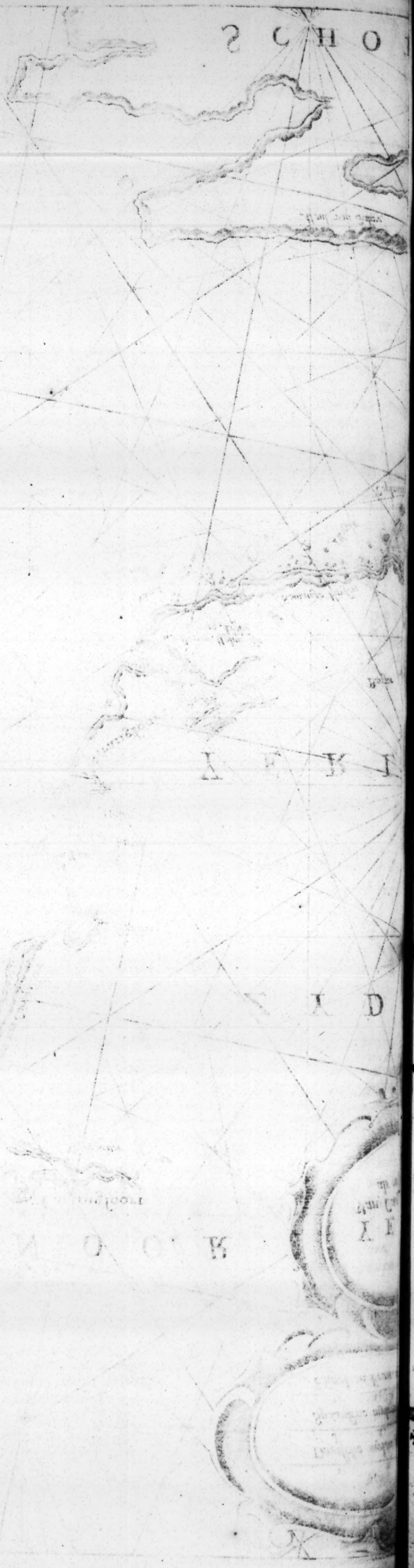
Green Caſtle.

About 7 leagues n. e. from Carlingford, lyeth a poynt called S. Johns poynt: betwixt both about half waies lyeth the mount of Carlingford, a high Mountain. From S. Johns poynt lyeth of a ledge of rockes, whereof you muſt take heed. A great league to the northwards of S. Johns poynt, lyeth Arglas from thence forth to the haven of Strangford it is 3 ſmall leagues.

S. Johns poynt.

Arglas.

From the north poynt of the haven of Strangford, lyeth off a foule ledge of Rocks. A little off from the ſouth poynt lyeth a ſuncken rocke, which at half ebbe commeth above water. For to ſayle into this Haven, you muſt leave this ſuncken Rocke on the larboard ſide, and goe to the northwards of it, but muſt take good heed of the foreſaid ledge at the north poynt. A man may alſo goe in through to the ſouthwards of the foreſayd ſuncken Rocke, betwixt it and the poynt (but to the northwards of it) is the beſt and the broadeſt Channell. Somewhat further in lyeth alſo an other ſuncken Rocke at the northeaſt ſide, that muſt bee left on the ſtarboard ſide in going in. When you come ſo farre as Audleys Caſtles, there



Drodagh
Hedehde Kout
Male head
Maide toren
Yerlands eij
Lambey
Rot abil
Duytſche mylen
Spaanſche mylen
Engel. en Fran.
Dundalck
N O O R
Carlingfoort
Newry
Narrow water
Gron Caſtel
Monks van Carlingfort
Dondrom
S. Ians point
S. Ians haven
Arglas
Y E R L
Strangfoort
Grunne de
Lough Cone
Bangor
Moock van Molings ſte
Speck van Arglas
Brialle
Sommige ſpreſan
Nord rod
Zuyd rock
Mont van Galwy
I Man
S C H O T

D O O S T

V A N

L A N D T.

Scheeps haven

Lough Swilly haven

Ences

Dery

Bannemagh

Boom ofte Iree

Kilmor

Vuyle Sand bay

Boomen ofte Irees

Robbon Eylandt

Wit kasteel

Rodt kasteel

De Reede

Magillions point

Coleraine Castle

Grenkasteel

Lough Foyl haven

Coldag haven

Oxes gat

Ty haven

Emisthon

Egmonden van Engelsterbus

Tours

Banthaven

Castel

Skores portus

Donluxe Castel

Kiecken

Belfast

Port Belletrio

Knocfergus

C. Pingore

Schaege eylant

Oldfliet

Slecht landt

Hooge hoeck

Schorre hoeck

Castel

Estre forland

I. Kne

De Mayds

Ranghleens

Longendal

C. Cantyr

Yley

Ile Sondt

Surey

Lougreau

18 Elxee 17

18

18



there you may anchor or runne in about the poynt on the larboard ſide, and anchor there under it.

About a league and a halfe to the northwards of Strangford lie the Rockes Southrocke and Northrocke, of them read as followeth.

From Strangford Haven to the Northwards lyeth the coaſt forth n. n. e. one league unto a poynt, which ſome doe call the poynt of Arglas, others the poynt or head of Molines; from thence falleth away the coaſt unto the Bay of Knockfergus northnorthweſt.

By the foreſayd poynt of Arglas or Cape of Molines, to wit, to the northwards of it, two little miles, lye two great rockes: the ſouthermoſt is called the Southrocke, it lyeth about two mile, to the Southwards of the Northermoſt, called the Northrocke. From the ſouth end of the ſouthrocke lyeth a ledge of rockes at the leaſt two miles off, alſo one from the northeaſt point a great wayes northeaſt off into the ſea. The north rocke is a great plate of rocks, whereof many at high water are under water. There goeth alſo from it a foule ledge off unto the land, ſo that a man may hardly ſayle through betwixt the rocks and the maine land, except a man be extraordinary well acquainted. But betwixt the north-rock and the ſouthrock goeth a faire broad Sound through, where men may well turn too and again, and at many places may anchor, it is all over good clean ſandy ground, 6 or 7 and 8 fathom deep.

From the eaſt ſide of the ſouthrocke unto the Iſlands at the eaſt point of the bay of Knockfergus, called Koppen, or Kopland Iſles, the courſe is north northweſt or ſomewhat more northerly, about ſix leagues: for when men ſayle from the eaſt ſide of theſe Iſlands to the ſouthwards, with a ſ. ſ. e. way, they goe farre enough without the north and Southrocks. There betwixt them both lye divers more little Iſlands, rocks, and ſuncken rocks, & ſhoals, for the which men muſt take good heed when they will come neare by the ſhoare.

The Kopland Iſles lye about an Engliſh mile from the land, they are upon the off ſide to ſeawards, cleane, but from the inner ſide there goeth off ſome ledges and foule ground, in the mid-way there going through it is 5 & ſix fathom deepe, but it is beſt to goe without, except for them that are well acquainted. The n. poynt of Knockfergus, lyeth diſtant from the Copland Iſles 3 or 4 leagues n. w. or ſomwhat northerly, for which a ſ. e. courſe from the north poynt towards the foreſayd Iſlands, that goeth farre enough without them.

The bay of Knockfergus is a great broad ſound; about 3 leagues inwards in the Bay w. from Copland Iſles, is the road before Knockfergus, there is good anchor ground in 3 fathom and a halfe. Somewhat more further out towards the n. poynt alſo on the n. ſide of the bay ſtandeth a Caſtle, called Mouſehils Caſtle, by it is a ſandy bay, where is good anchorage, as well for great ſhips as ſmall, for the n. and the n. w. winds, but a ſouthweſt winde maketh a bad road in theſe places.

A little to the northwards of the north poynt of the bay of Knockfergus, lyeth a little Iſland called Kow, from thence lyeth the Coaſt of Ireland forth northnorthweſt, about 9 or 10 leagues unto the Iſlands of Raghleens. Betwixt them both lye the 9 Maydes one great league without the land, and two great leagues to the northwards of the Bay of Knockfergus, they are great rocks, that lye but little above water, or low rocky little Iſlands, and a multitude of rocks under water about them, that lye off ſoo far to the northnortheaſt, that men cannot come neare them within 5 or ſix Engliſh miles. There goe ſom Creekes through the foule grounds, where men (for need) might ſayle through, but it is no wiſdome to go about it, when there is no need, and that men can do better. Not very long ſince, there came a man (by night unacquainted) there in, and runne through onely upon the ſight of the breaches of the water, and got through without any hurt, but not without great feare and danger. He that commeth of from the faire Forland, muſt (at leaſt) goe South eaſt and by eaſt, for to runne alongſt cleare of theſe foule grounds. From the weſtſide alſo lyeth off a little tayle of a ledge of rockes towards the land. Further, it is there cleane, that men may ſayle through there within, but men muſt not come nearer the Maydes, then about halfe channell betwixt them and the maine, but the maine land ſo neare as they will, which is both cleane and cleare, with many Bayes, where men may every where anchor, yet here and there lye ſome rocks, but they are all above water: There is nothing that can hurt you, but men may eaſily ſee it.

A great league to the northwards of the north poynt of the Bay of Knockfergus, and a halfe league ſouthſouthweſt from the Mayds, lyeth a haven called Old-fliet. For to know it when men come from the northwards, they ſhall ſee two flat little Towers, the one ſomewhat higher then the other, like as if men ſaw a ſhip with maine ſayle & foreſayle, without toppe or toppe-ſayles: theſe ſtand upon the northſide of the Bay. Oldfliet.

At the ſouth poynt lyeth a ſmall round little Iſland or rock called the Knee, a ſpeciall marke for to know this Bay; men run in there amidſt the channell. But when you come from the ſouthwards, and get ſight of the little Iſland Knee, then run in cloſe about it. Iſland Knee.

From Old-fliet to the northwards unto faire Forland, the coaſt is very cleane, that you may ſayle cloſe alongſt by it, boldly without any feare, except you runne farre of from land, without the foreſayd Maydes towards the Scottiſh coaſt.

Faire Hid, or faire Forland is the outermoſt northeaſt poynt of the maine land of Ireland, and lyeth a little to the ſouthwards of the Iſland Rachleens, ſo that this poynt and the eaſt poynt of Rachleens lye neare about ſouth and north one from the other. Faire Forland.

At Rachleens, or faire Forland the northeaſt poynt of Ireland, come Scotland & Ireland neareſt one to the other. The Rachleens is an Iſland that men may ſayle round about, either to the northwards or to the ſouthwards, as they will according as it happeneth beſt convenient with winde and tyde. At the ſouthweſt ſide is a faire bay, where is good lying almoſt for all windes. When men come from weſt it ſemeth to the ſouthwards of the Rachleens to bee cloſe without any opening, becauſe the eaſtermoſt poynt of Irelands faire Forland, lyeth ſomwhat further out, behinde the Rachleens, but when they come nearer betwixt them, ſheweth it ſelfe open by little and little. On both ſides are the ſhoares flat and cleane, ſo that men may anchor there where you wil, either by the coaſt of the maine land of Ireland, in 8 or 9 fathom, or in the bay under the Iſland in cleane ſandy ground. Over againſt the Rachleens, cloſe by the maine land, lyeth another little high Iſland, called the Lambs or Sheeps Iſland, to the ſouthwardes of it betwixt it and the main, men may not ſayle there about it, but betwixt it & the Iſland Rachleen it is broad enough. Lambes Iſland.

From the Rachleens unto the Skires Portruſh, the courſe is w. ſ. w. diſtant 7 leagues. About 2 leagues to the eaſtwards off it, in the maine land, lyeth Porto Belletrie, a bad roade for great ſhips, the ground is there fowle and ſharpe.

Betwixt Porto Belletrie and Skires Portruſh, neereſt unto Skires Portruſh, lye the Chickens, theſe are ſuncken rockes, which may be ſayled about on both ſides, for to come to anchor under Skires Portruſh. Chickens. Skires. Portrush.

The Skires Portruſh is a rocky Iſland, it hath on the ſouth ſide a faire bay, where you may lye in ſixe and ſeven fathom, cleane & ſandy ground land-lockt for all winds, except for the eaſtnortheaſt winde, which bloweth alongſt the ſhoare there open in. For to come under this Iſland from the eaſt, you muſt goe cloſe alongſt by the ſhoare off the maine land, for to ſhun theſe foreſayd ſuncken rockes the Chickens. It is there all over cleane and cleare: or els if you were minded to goe without, or to the ſouthward off the Chickens, for to come under the Iſland, you muſt ſhun the eaſt poynt

of the Iſland, becauſe of a ſuncken rocke that lyeth a little off from the eaſt poynt of the Iſland. At the northweſt ſide of this bay is alſo a ſmall narrow channell, where you may ſayle through.

Bant-haven. A little to the weſtwards of Skires Portruſh lyeth the Bant-haven, there alongſt you may ſayle up unto the new Towne Colran, it is a bad channell to come in, as well by reaſon of the ſtrong freſhoale that commeth out, as alſo becauſe it is very ſhoale: with ſhipps that draw 8 foote water, you muſt have at leaſt 3 quarters of the flood before you can goe in.

Lough-foyle. Three leagues northweſt and by weſt from Bant-haven, or weſt and by north from Skires Portruſh, lyeth the haven of Loughfoile, before it lyeth a great plate of ſand called the Touns, which lyeth from the weſt poynt of the haven a great wayes to the northwardes of from the ſhoare, when the winde is out of the ſea, it breaketh very much upon it, with ſmall ſhips that draw little water, men may ſayle into Loughfoile-haven at high water to the ſouthwardes of the Touns, betwixt the Touns and the ſouther-poynt, called Magillions poynt; but it is there very uneven, and at full ſea there commeth no more then eight foote water, but alongſt to the weſtwards of the Touns, it is very deepe, men may ſound about the Touns on the off ſide in foure fathom.

For to finde the Channell that lyeth into the weſtwardes off the Touns, (comming from the eaſt, or alongſt by the Touns) you muſt looke out for a little ſandy Bay, that lyeth on the weſt-ſide, even within the north-poynt of the river under the high land; bring it ſoo, that you may ſee it open of the foreſayd north-poynt, and ſayle in there upon, untill you come by the land, and then runne in alongſt by it ſouthweſt untill you come right againſt Greencaſtle. If you come from the weſt or the north, you may boldly without feare runne alongſt the ſhoare, & about the poynt upon your lead, without comming neere the towne, you may ſee any thing that might doe you hurt, comming by Greencaſtle, there may you anchor, ſoo that you may ſee Withcaſtle without the poynt of Green-caſtle, there you may lye within the Towns, ſheltred for windes out of the ſea.

Road in Lough-foyle. For to ſayle up from Green-Caſtle, you muſt runne up alongſt by the weſt ſhoare by your lead, and ſhunne the little ſandes that lye here and there alongſt that ſide, until you come paſt With-caſtle, right againſt the three trees, there is the ordinarie road.

Betwixt Green-caſtle and With-caſtle neereſt unto Green-caſtle goeth a Creecke or Slencke through the grounds, unto the eaſterne ſhoare, which is as deepe or deeper then the right fareway unto With-caſtle. When men come off from Green-caſtle, they muſt take good heed not to goe farre off from the weſterne ſhoare, leſt they fall into that Creeke.

How men ſhall ſayle from the foreſayd roade forth up unto the Towne Derry, they may perceive or marke by the card.

Iſlands Eneſter-hull. From Lough-foile-haven unto the Iſlands Eneſterhul (by ſome called Monſterhul) the courſe is northweſt foure or five leagues, theſe are ſmall black Iſlands or rockes, not very high above water, and lye a little off the northermoſt poynt of Ireland, called Eniſtom, a high plaine land, and very good to knowe for him that hath once ſeen it. Betwixt the Iſlands and the point men may ſaile through, but not without great danger for them that are not very well acquainted with it, becauſe off much fowle ground and ſhoals that lye betwixt them both. Under the foreſayd poynt Eniſtom, on the weſt-ſide, men may anchor for eaſterly windes, or els to ſtoppe the tyde.

Lough-Swilly. From the Iſlands Eneſterhull unto Lough-Swilly, of ſome called Lockſillie, the courſe is ſouthweſt 5 leagues, that is a faire haven. For to ſaile in there: men muſt ſhunne the weſt ſide, and goe in alongſt by the eaſterne ſhoare: The land about Lough-Swilly is the higheſt land of the whole north coaſt of Ireland, and thereby it is alſo very good to know, for thoſe that (comming out of the north) do fall with the lands thereabouts.

Foure or five leagues weſtſouthweſt, or ſomwhat weſterly lyeth a large broad-haven, called Sheepeſhaven, but it is at ſome places foule ground, within it men may lye landlockt for al winds. The weſt poynt lyeth out, called Hornehead, or Cape de Horne, upon it is a hill with two hommockes in faſhion like two hornes and there after the poynt is named. Horne-head. Cape Horne.

At the weſt ſide of this poynt, men may ride and anchor within the rockes for eaſterly windes. Betwixt Lough-Swilly & Sheepſhaven lyeth alſo a Bay, where men may anchor, but the ground is not very cleane, and right againſt it in the offing, halfe a league from the land, lyeth a ledge of rockes, which at high water are under, and at low water lye above water, may (for need) run through betwixt it and the land, but without it is beſt and ſureſt.

The Coaſt of Scotland.

Lough-rean. The haven or ſound of Loughrean or Loockreen in Scotland by the point of Galloway, lieth diſtant from Faire Forland the n. e. poynt of Ireland, e. ſ. e. about eleven leagues, but the poynt called Cantir, lyeth diſtant from Loockreen n. w. & ſ. e. 9 leagues, there betwixt them both goeth up a great broad ſound northeaſt in, called Dunbritain Firth, through which men ſaile up unto Glaſkow in Scotland. Dunbritaine Firth.

The ſound of Lookreen you may ſayl in, and a good wayes you may turn in to and againe for to anchor there within for weſterly winde, if you doe come no neerer the Gores on either ſide then in foure fathom, you can take no hurt: You may anchor ſomewhat in, by the ſecond high poynt on the eaſt ſhoare in tenne or 12 fathom.

About ſeven leagues to the northwards of the poynt of Galloway in the foreſayd great ſound, lyeth a high ſharpe Iſland, cleane round about of faſhion al moſt like unto a pook of Hay, called Ailza, or Elzee, there you may boldly ſayle round about, it is there round about it, and cloſe by it 18 fathom deepe. Elze Iſland.

From Elzee northwards ſixe leagues lyeth alſo another little Iſland, cloſe by the eaſt ſide of the great Iſland Arren, called Lamblaſh, or Lamb-Iſle, cleane alſo round about, there you may ſayle round about it, and anchor under it for all winds in ten, twelve, or thirteene fathom, to wit, within it, betwixt the Iſland & the great Iſland of Arren. Lamb-Iſle.

North and by eaſt and northnortheaſt two great leagues from Lamb-Iſle, lyeth an Iſland by the poynt of the maine land called Commer-Iſle; on the eaſt ſide of it betwixt the Iſland and the maine land, you may ſaile through into a faire bay, where men are landlockt for all winds, & from thence you may ſaile forth unto Dunbrittaine, or into the river Glaskow. The foreſayd Iſland Commer-Iſle lyeth from the Iſland Elzee, about north & by eaſt. For knowledge of this Iſland, when men come of from Elzee, or from the ſouthwardes towardes this Iſland, men ſhall ſee a great caſtle on the eaſt ſide of the maine about a great league to the ſouthwards of Commer-Iſle, and alſo a little caſtle, a good wayes to the northwardes, cloſe upon the water ſide, that ſtandeth right to the ſouthwardes of the Iſland Commers-Iſle, or the ſound that lyeth there unto the eaſtwards of it, upon the ſame Iſland ſtandeth alſoo a little caſtle cloſe to the water ſide. Runne in betwixt the Iſland and the maine land, about northnortheaſt in, and leave the Iſland a great cables length on the larboard ſide, and the main land on the ſtarboard ſide you muſt ſhun more, becauſe of a great ledge that lyeth off from it towardes the Iſland, and ſomewhat more northerly. Having gotten cleare of the end of this ledge Commer-Iſle. Commer-Iſle Bay. Commer-Iſle.

runne

runne then right towards the maine land into the bay, or ſound, and anchor there in ten fathom, right againſt a ſtone houſe with an ore hard thereby, it ſhall be then a ſtearne your ſhip about 7 fathom deepe, and there moore your ſhip well.

For to ſayle out of the Sound of Commer-Iſle, towardes Glaskow, goe firſt northweſt and by north unto by the poynt of the Iſland, that is, to the weſtwards of you, and then north, alongſt by it, then by little and little more eaſterly, at length northeaſt, runne ſoo all alongſt by the eaſterland, without leaving of it, you ſhall not faile to come to the ſound of Glaskow. Comming by the poynt runne cloſe about by it firſt eaſtnortheaſt, eaſt, and eaſt and by ſouth, at leaſt eaſtſoutheaſt, all alongſt by the ſoutherne ſhoare, you ſhall then ſee a caſtle ſomewhat a head upon the ſouther-land, cloſe upon the water ſide, with two tuffes of trees upon the high land right eaſtſoutheaſt from the caſtle; keepe that foreſayd caſtle between the tuffes of trees, and ſayle in there upon, ſo ſhall you run right, alongſt the deepeſt of the Creeke, there is at high water five fathom, and at low water three fathom. From the north ſhoare lyeth off a great ſhoale, which lyeth over the Sound more then two third parts from the norther ſhoare; towards the ſouth ſhoare it falleth dry at the loweſt water, therefore men muſt ſhun the norther ſhoare, & runne alongſt by the ſouther ſhoare. There ſtandeth a white caſtle upon the ſouth ſhoare, right againſt that begin the foreſayd ſands. In the Creek it is ſoft ground, but towards the ſand the ground is hard, therefore when you feele by your lead that it is ſomewhat hard, that is a token that you come too neere the ſhoals, ſaile then ſo forth upwards to Dunbrittaine, there lyeth a little Iſland on the ſouth ſhoare, which is at low water faſt to the Iſland when you ſhall be paſt it about two Cables length, then anchor there in five at high water.

A ſouth and by weſt moone maketh there the higheſt water.

Of the Tydes and Courſes of the ſtreames.

At Dublin a ſoutheaſt and northweſt moon.

The flood commeth here from the ſouthwardes, and alſo from the northwardes, about the north part of Ireland, and meete one another about right againſt Carlingford, where they ſtopp one the other. The ebbe contrariewiſe falleth (to the northwards off Carlingford) to the northwards, and (to the ſouthwards of Carlingford) to the ſouthwardes.

On the coaſt of Ireland from the Southrock and Northrocke unto the Copland Iſles, a ſouthſoutheaſt and northnorthweſt moone maketh full ſea. But to the northwardes of it a ſoutheaſt moone.

On the Iſland off the Ragleens & Skires Portruſh an eaſtſoutheaſt and weſtnorthweſt moone.

The flood commeth there out of the weſt, and falleth through betwixt Ireland and Scotland: from the cape Cantir to the mull of Galloway, ſouthſoutheaſt, unto the Iſland Man, there floods out of the ſouth and north doe meet one to the other. The ebbe contrarie wiſe falleth alongſt the coaſt northnorthweſt betwixt Ireland and Scotland to the weſtwards unto the Ocean ſea.

At Engliſtoun in the Sound of Glaskow, a ſ. weſt moone maketh full ſea.

In the haven of Loughfoile an eaſt and by ſ. and weſt and by north Moone maketh full ſea. The flood commeth there out of the weſt and northweſt.

At the Iſlands Eneſterhull, and in Sheepe haven an eaſt and weſt Moone maketh full ſea. The flood commeth there out of the weſt.

Courſes & Diſtances.

From the Sound of Dalke to the poynt Houth northnorth-eaſt two leagues and a halfe.
That courſe runneth without the poynt Houth, Irelands eye, Lambey, and Rock a Bill.
From Lambey to Drodagh northweſt and by north 6 leagues
From Lambey to Carlingford north and by weſt, 11 leagues.
From Calingford to S. Iohns poynt northeaſt, 7 leagues.
From S. Iohns poynt to Strangford northeaſt and by north 4 leagues.
From Lamby to the South-rocke northnortheaſt, 22 leag.
From the northrock & Southrock unto the Copland Iſles n. n. weſt 6 leagues.
From the Copland Iſles to the north-poynt off Knockfergus northweſt, ſomewhat northerly 3 or 4 leagues.
One league to the northwards lyeth the haven of Oldefliet.
From Oldefliet to the Raghleens within the Maydes, through northnorthweſt 7 leagues.
From the Ragleens to Skires Portruſh weſtſouthweſt, 6 or 7 leagues.
From Loughfoyle to the Iſlands Eneſterhull northweſt, 4 or 5 leagues.
From Eneſterhull to Lough Swilly ſouthweſt, 5 leagues.
From Lough Swilly to Sheepe haven w. ſ. w. weſterly, 4 or 5 leagues.

Heights.

The Iſlands of Eneſterhul at the northermoſt poynt of Ireland lyeth in 55 degrees and 10 or 12 minutes.

How theſe Lands doe ſhew themſelves at Sea.



When a man commeth from the ſouthwards, thus ſheweth the Bay of Dublin, with the poynt Houth, and the Iſland Lambey to the northwards of it.



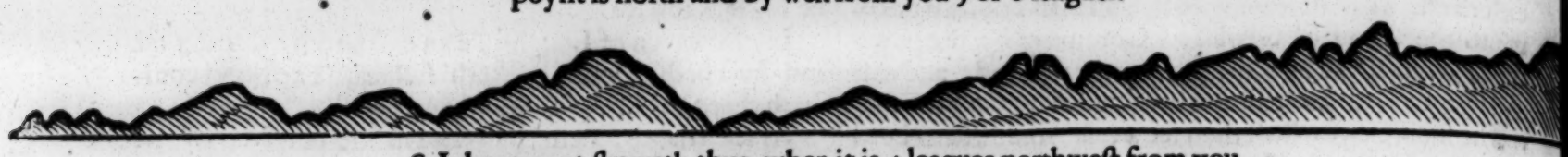
The Iſland Lambey ſheweth it ſelfe thus, when it is from you northweſt and by north one league off.



Thus ſheweth the land a little to the ſouthwards of Carlingford, when this high poynt is northweſt from you about five leagues. He that will goe into Carlingford, muſt goe in cloſe by the ſhoare.



The land to the northwards of Carlingford ſheweth it ſelfe thus, when the northermoſt poynt is north and by weſt from you 5 or 6 leagues.



S. Johns poynt ſheweth thus, when it is 4 leagues northweſt from you.



Thus ſheweth the poynt of Scotland over againſt the Bay Knockfergus, called the mull of Galloway, when men ſayle alongſtg by i 1 league without the land, & that the northermoſt & the low poynt is n. e. from you, & the ſouthermoſt ſ. e. from you. Under the north poynt is on both ſides good anchoring in 10 or 12 fathom, for ſoutherly and eaſterly windes.



The Iſland Elzee in the great bay of Dunbrittain ſheweth it ſelfe thus.



The Iſland Lamblaſh, or Lamb Iſle on the e. ſide of the Iſland Arren ſheweth it ſelf thus, being 2 leagues off from it.



The Iſland Commer Iſle lying before the ſound of Dunbrittaine, or Glaskow ſheweth it ſelfe thus.



Thus ſheweth Cape Cantyr, when it is from you northweſt and by weſt about 7 or 8 leagues.



Iſle Man ſheweth thus, when you are 4 leagues ſoutheaſt from it.

The eighth Demonſtration.

In which

Are ſhewed the northweſt Coaſts of Ireland, from Hoornhead to Slynehead.

WEſtnorthweſt about two leagues from C. de Horne or Hornhead, lyeth the Iſland Tore, to the ſouthwards of it lye three Iſlands, called the Iſlands Baleneſſe, men may ſayle through to the ſouthwards of Tore Iſland, to wit, betwixt Iſle Tore, and the Iſland of Baleneſſe, & alſo within the rocks.

Tore Iſle.

Iſlands Baleneſſe.

From the Iſland Tore to the Iſles of Aran, the courſe is ſ. w. 6 or 7 leagues, betwixt them both, not far from Iſland Aran, lye ſome high rockes, called the Staggs of Aran. Alongſt all that coaſt betwixt Horne-head & the Iſlands of Aran, is good anchor ground all over.

Iſlands of Aran.

Staggs of Aran.

For to come to anchor under the Iſlands of Aran, comming out of the north, runne alongſt by that great Iſland, leaving it on the ſtarboard ſide, untill you be within it: goe then towards the ſouthweſt, & anchor on the ſoutheaſt ſide, there is the roade. Men may alſo anchor in the Iſlands over againſt it towards the maine, in divers places, and lye landlockt for all windes.

Upon the northweſt poynt of Ireland, a good wayes landwards in, lyeth a high hill, of fa[illegible]n al moſt like a Sugarloafe, which is ſeen in cleare we[illegible]er before any other land, at leaſt nine leagues at ſea: When that hill lyeth eaſt and by ſouth from you, then ſayle in right with it, you ſhall not miſſe to fall right with the great Iſland Aran.

Cape de Telling.

Telling-head.

From the Iſland Aran unto the poynt Telling-head, called by the Iriſh cape de Telling, or Tellin; the courſe is ſouthſouthweſt eight or nine leagues. Three or foure leagues to the northwards of C. de Telling lyeth an Iſland, called Raigleene borne.

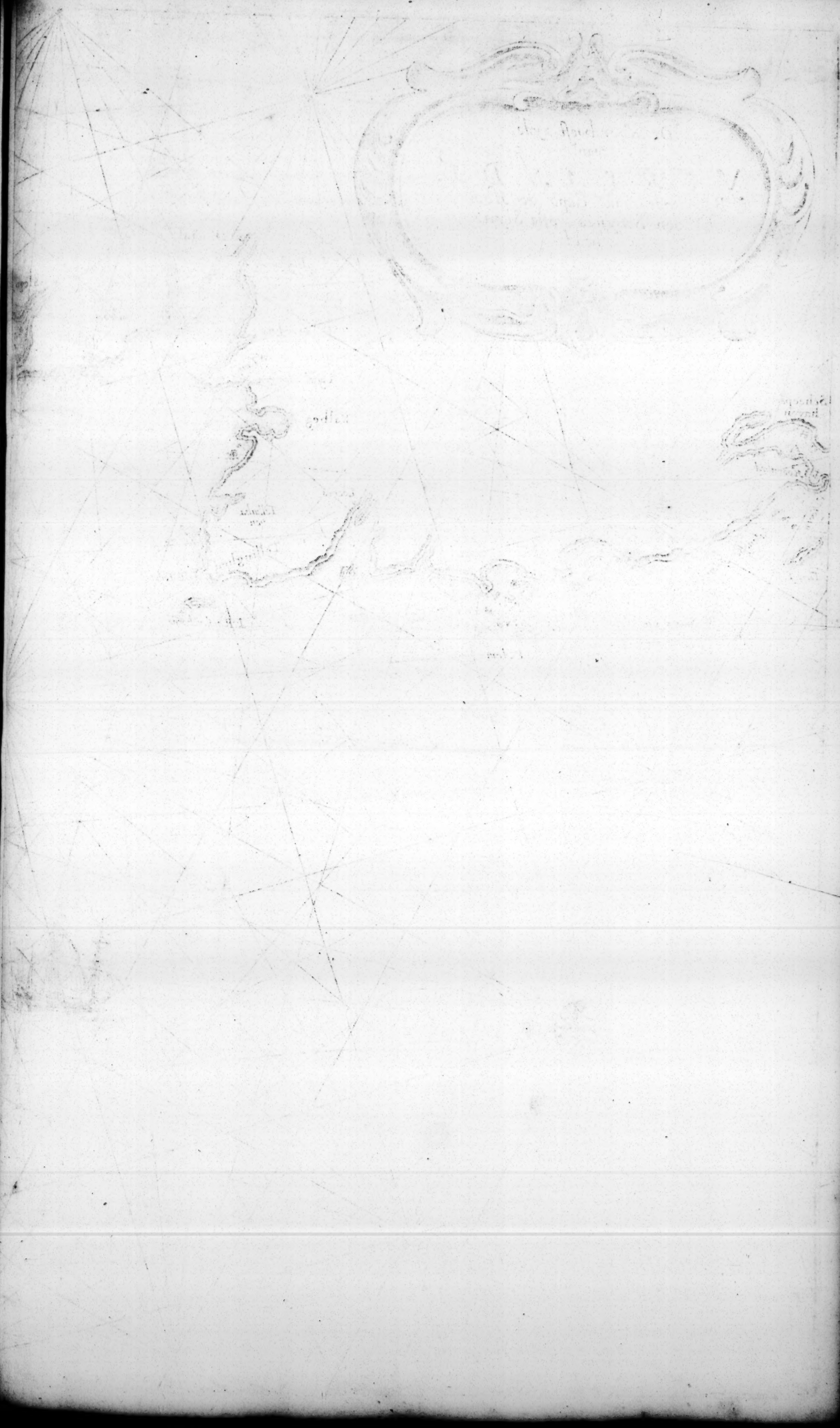
At the Cape Telling lyeth a little Iſland, halfe a league from land, men may ſayle through betwixt the Iſland and the Cape, boldly without any danger.

To the ſouthward of C. de Telling, to wit, betwixt the Cape and the Stagges of Broadhaven, lyeth the land with a great bay, where in lye many good Havens, as Tillinghaven, Kilbegh, Dungall, Ballaſhaven, Slego, Endrigo and Moye.

From the Cape of Telling unto Kilbeg lyeth the coaſt e. ſ. e. about foure leagues: betwixt both, about one league and a halfe from the Cape, lyeth Telling-haven, a round bay with good ſandy ground, there may about 30 ſhips lye, weſt and ſouthweſt windes doe blowe there open in, for all other windes men are there landlockt.

Kilbeg

Kilbegh, or Kalebegh is alſo a faire round bay, but it is very narrow at the comming in of it: When men are a little from the ſhoare; it ſeemeth to bee all cloſe without any opening. About halfe a league to the weſtwards of this bay, a quarter of a league from the land, lyeth a little Iſland, which is very low & plaine at both ends going playne downe, that is a good mark to know this foreſayd bay, men may alſoo ſayle through betwixt the Iſland & the maine, if they will. When you come out of the weſt, and are



De Noordweſt zyde van YERLANDT.

Beginnende van Capo de Hoorn tot aen Schynes, ofte Slyne: head.

Scheeps haven
Hoornhed
C. Hoorn
Baleybe eylanden
Torre I.
K. Iady
Caſtel
Staecx van Aran
I. Aran
Dungal
Dungalhaven
Bulſtoun
Balaſhaven
Slego
Bonaroes
Erverbaye
Malchaven
S. Lans
Caſtel Monſeyn
Kilbeg
Locrus
Tellinha: ven
Tellinghed
C. Tellin
I. Raigleneborne

Duytſche mylen 15 in een graadt

Spaanſche mylen 17½ in een graadt

Engel. en Fran. mylen 20 in een graadt

C O N N A V G H .

Bores

Breſel

Tachon

Don Patrix Ild

Schiermoo

Boon owen

Schyner oft Slynehead

Moye oſte Muyn

Slynhooft

Horſhe

Roche

Clere

Ooſter Eylandt

Can. Aſia

Aſkelhid

Brod haven

Stakes van Brodhaven

Blacrock oſte de Moor

43

L O

C H

and are paſſed that Iſland, then go neere the ſhoare, which is clean & cleare, & go freely cloſe a board of it, untill you ſhall ſee this bay open, and then ſayle boldly in, without any feare, betwixt the two ſhoares there is nothing (neither in the going in, neither within in the bay) that can hurt you, if you doe not ſayle upon the ſhoare. When you ſhall be come in anchor where you pleaſe in 5, 6, 7, or 8 fathom, ſo ſhoale or deepe as you will, on the north ſide within the bay ſtands a little Caſtle.

About a little league to the eaſtwards lyeth another Bay within ſome rocks, called Mackſwyns bay; but it is not to goe in, except men be very wel acquainted, they muſt go betwixt the rocks in untill they bee gotten in, there they may ſave a ſhip without cable or anchor.

A great league to the ſouthwards of Kilbegh, lyeth a long lying out poynt, called S. Johns poynt right weſt from that poynt, a quarter, or a little halfe league, lieth a great Rock under water, whereupon the ſea breaketh with great noyſe. Betwixt that rock, and the poynt of S. Johns point, men may ſayle boldly through, it is there cleane and cleare.

About 2 great leagues to the eaſtwardes of that foreſayd point S. Johns point, lyeth the Haven of Dungall, into the ſouthwards. For to ſaile in there, you muſt firſt ſhun the eaſter ſhoare, which it very foule with dry plates and Rocks. When you are come right againſt a little caſtle that ſtandeth on the north ſide, right againſt it lieth off a little riffe from the ſhoare, that you muſt avoyd alſo. And when you are come about the poynt of that riffe, you muſt goe over again to the northſide, for the ſouth ſide is there flat and ſhoale. Betwixt Saint Johns point and Dungall-haven alongſt the coaſt is all over good anchor ground.

The Haven of Moy hath at the comming in a broad bay, in it lye ſome rockes. For to ſayle in there, you muſt leave them all on the weſt ſide, that is, on the ſtarboard ſide, & run towards a little ſandy Iſland, that hath at the north end a little riffe, you muſt goe into the weſtwards of it, and leave that Iſland on the larboard ſide. Even within that foreſayd Iſland lieth another little round green Iſland, that muſt bee left on the ſtarboard ſide, ſo ſoon as you ſhal be right againſt it, you muſt let fall your anchor, for a little further it is ſhoale and hard ſandy ground, the greateſt anchor muſt be brought towards that foreſayd long ſmall Iſland, & the ſmall anchor towards the little greene Iſland, it falleth there at low water allwayes dry. If you will goe from thence before the Town Moy, you muſt light your ſhip to 8 foot, for to come through betwixt the long ſmall Iſland, and the ſ. grounds, there is at high water with an ordinary tide no more then 9 foot water; being come over the neck, you ſhall come into a poole before the towne Moy, there you may ride a float at a low water. In the road againſt the Iſland it is 15 or 16 foot deep.

The Stagges of Broad-haven are Rocks that lye to the northwards a league or a league & a halfe a ſeaboard of the point, to the northwards of Broad-haven.

Broad-haven lieth in ſ. and by weſt, in the ſound lye 3 or 4 rocks, theſe muſt be left on the larboard ſide, & run in there alongſt to the weſtwards, until you come within the haven.

A great league to the weſtwards of Broad-haven lyeth an out point ſouthweſt from the Staggs. From thence lyeth the coaſt alongſt to Black-rock ſ. ſ. w. Black-rock is a great high black-rock with more other rocks by it, and lyeth from the foreſaid point ſ. ſ. w. diſtant about 6 leagues, & about a league northweſt from the out point Acklehead.

Acklehead is a very high poynt, and ſheweth it ſelfe a farr off like an Iſland with a great Saddle, thereby it is good to be knowne. Within this poynt lye alſo 2 exceeding high hills which together with the point men ſhall ſee firſt at ſea before any other part of the land, ſo that the poynt doth ſhew it ſelfe firſt like three Iſlands. Men may ſayle through betwixt Acklehead and Blackrock; comming from the ſouthwardes men doe leave Acklehead on ſtarboard, and Blackrock (with the rocks thereby a ſeaboard) on larboard, & the courſe lieth through betwixt them both n. n.e. & n. & by eaſt unto the point of Broadhaven, it is there large and wide. Acklehead.

To the n. wards & to the e. wards of Acklehead, lie divers havens, where it is good riding, a little to the n. wards of Acklehead, you may run into the w. wards, betwixt the low land to the n. wards on the larboard ſide, & the high land of Acklehead on the ſtarboard ſide a great wayes in, & anchor in 7 & 8 fathom, landlockt for all windes & from thence may come out againe to the n. wards, or elſe may come out into the ſea again to the ſ. wards round about the land of Acklehead.

From Acklehead to Slynſhead (by the ſea faring men called Twelve-pence: becauſe the land doth ſhew it ſelfe in 12 round hommocks) the courſe is ſouth, what eaſterly 11 leagues, betwixt them both lye three Iſlands before a great bay, the northermoſt or next to Acklehad is called Cleere, this hath a high hill on the n. end that is very ſteepe, and at the ſouth end it is flat going downe. The ſecond or middlemoſt is called Boche, within it is a road for thoſe that are bound to the ſouthwards, where men may anchor in foure fathom: The ſouthermoſt is called the Horſe. Slynshead. Twelve-pence.

Betwixt Acklehead & Twelve-pence lyeth within in the land, a very high hill like a Sugerlorfe, called S. Patricks-hil, or by ſome Don Patrix, that may be ſeen far at ſea & ſhall bee ſeene long, altering it ſelfe by the cliffe land, as men ſayle along the coaſt to the northwards, or to the ſouthwards. Patricks-hil.

From Sleynſhead, or Twelve-pence unto the ſound of S. Gregories, before the bay of Galloway, the courſe is ſ. e. nine leagues.

Of the tydes and courſes of the ſtreames.

In all theſe foreſaid Havens and roads an eaſt northeaſt and weſtſouthweſt Moone maketh full ſea. In the offing a ſeaboard a ſouthweſt and northeaſt Moone.

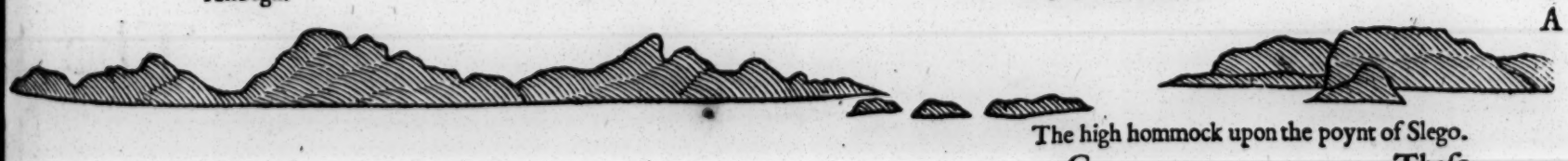
Courſes & Diſtances.

From C. de Horne, or Hornhead, to the Iſland Tore w. n. weſt 2 leagues.
From the Iſland Tore to the Iſles of Aran ſouthweſt 8 leagues.
From the Iſlands of Aran unto Tellinghead ſouthſouthweſt, 8 or 9 leagues.
From C. de Tellin or Tellinghead to Kilbegh eaſtſoutheaſt 4 leagues.
From C. de Tellin to the Stagges of Broadhaven ſouthweſt, 11 leagues.
From the poynt of Broad-haven to Black-rocke ſouthſouthweſt 6 leagues.
From Black-rock to Acklehead ſoutheaſt 1 league.
From Acklehead to Slynſhead ſ. e. & by e. 10 leagues.
From Blackrock to Rokoll n. and by w. 60 leagues.

Heights.

The River of Galloway lyeth in 52 degrees 54 minut.

How theſe Lands doe ſhew themſelves at Sea.

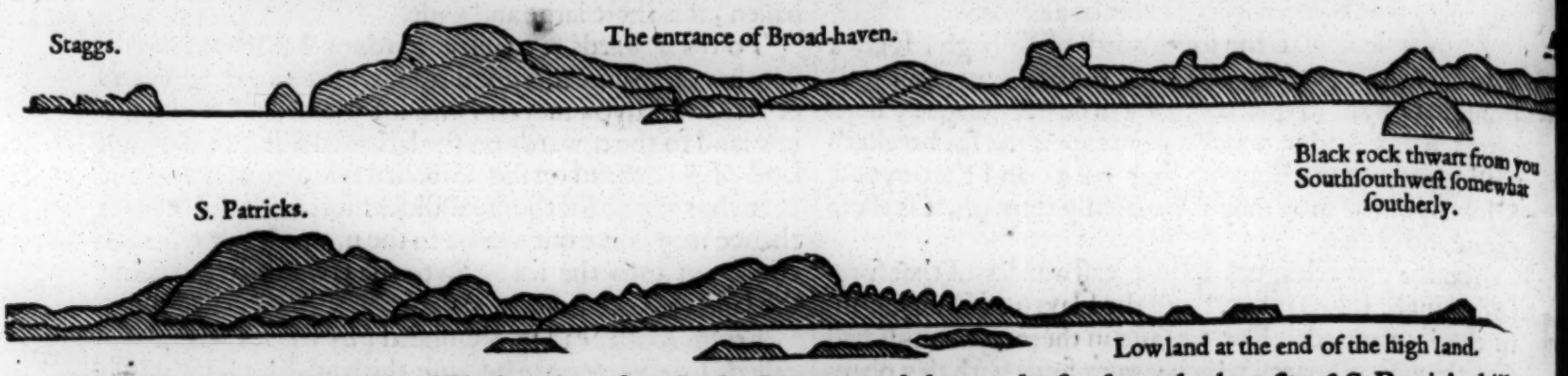


Theſe two figures belong at the AA, one to the other, and ſhew the forme or likeneſſe of the land betwixt Kilbegh & Slego.

A



Thus ſheweth the Land to the eaſtwards of the Staggs of Broad-haven towards Moye & Slego.



The land to the northwards of Blackrock, as farre as the Stagges, and then to the ſouthwards alongſt paſt S. Patricks hill, ſheweth, as in theſe two figures is Deſcribed, when men are thwart of Blackrock.



Thus ſheweth the land betwixt Blackrock and Acklehead, when it is eaſt from you, when you come more to the northwards, theſe high hils doe alter alſo wider one out of the other.

Black rock.

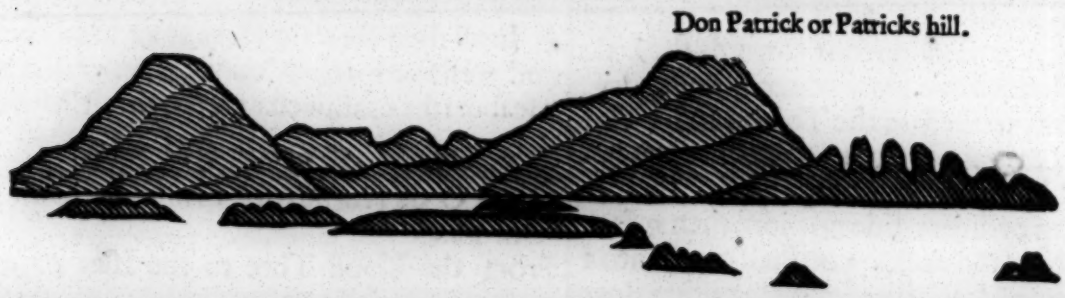


The poynt of Blackrock ſheweth thus, when you are to the northwards of it.



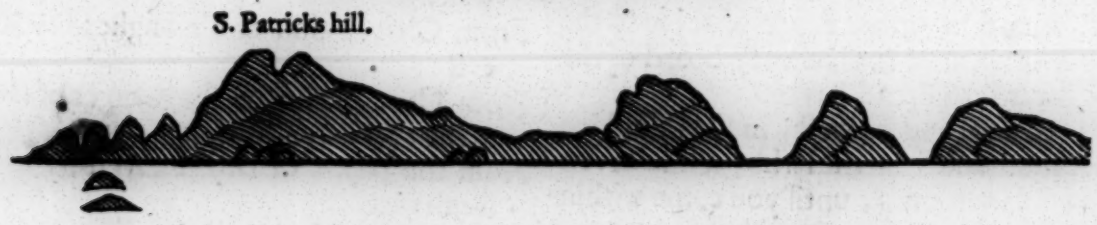
Thus ſheweth the poynt of Blackrock, when men are to the ſouthwards of it, then they ſee a ſharpe rocke over the poynt.

Don Patrick or Patricks hill.



Thus ſheweth S. Patricks hill, when it is ſ. e. and by ſ. from you, being not farre from Land, at the n. ſide of it lye ſome little Iſlands and rocks.

S. Patricks hill.



S. Patricks hill.



Thus ſheweth the ſecond poynt to the northwards of Blackrock, lying in the height of 54 degrees and a halfe.

The

Galloway
Voorstadt
Castel
36
Mottins Isle
18
20
20
Blached
Lemryck
Borratti
Clara
Maes
Port Nissadoy
Kronektz
Boonoiven
S. Kardis
Smalle
Sond
Dorshoofd
Liskamer
S. Gregorius sont
de Eylanden van Arron
Y
E
Slynehed
al: Slynhooft
Caroheske
Lonchl
Bartugras
Seatrix
Dombe
Dombr
Kilerdin
Can Saman
Lupis hooft
I. Hogs
al: Beeren
M. Brandt
C. Mineu
Smeryck
Dingle loch
3. Susters
Entry
C. Sibilla
Castel
Castel
Sond van Blasques
Emis More
Horses
Emis Clon
Emis Shroe
Rocken
Dingle Bay

De weſt cuſten
van
YERLANDT
Beginnende van Corckbeg tot aen Slyn:
hooſt.

R L A N D T.

Duytſche mylen 15 in een graat
Spaenſche mylen 17½ in een graat
Eng: en Fr. mylen 20 in een graat

Corckbeg
Corck
Ballihed
Sandbay
Verwallen caſt.
Withays
Modder
Kynſael
Kay
Sandbay
Oldehed al:
Oldhooſt
Glendore
Roſſe
Somrack
Chapel
Caſtelhaven
Mount
I. Sprit
Cort
Crook
Abaſtroa
Stakes
Kilhoa
Balgobben
Langerſhaven
Roſbren
Penaſes
Schollhaven
Abby
Limcon
Salmon lap
Long Iland
Cloſter Clere
C. de Clare
Donckery
Clin als een eyl
Long Argrum
Kil mare
Dingle Bay
Swylyvant more
Cods head
Ouc Caſtel
Bierhaven
Verwallen caſt.
Blaſkid
Sermoy
Valencia I.
Baleſchel lagh
Skeryſt
Wemis
C. Dorſes
Dorſes
Sond van Dorſes
Kalf
Koe
Bul
Ctern. Schyllingh
Middel Skyllingh
Great Schyllingh
Schellys hid
Y. Caſtele hid
Mesanhed
Croockhaven
Faſtne
Baltamoer
Il Sherke
Roſſe
Somrack
Chapel
Caſtelhaven
Mount
Cort
Crook
Abaſtroa
Stakes
Kilhoa
Balgobben
Langerſhaven
Roſbren
Penaſes
Schollhaven
Abby
Limcon
Salmon lap
Long Iland
Cloſter Clere
C. de Clare
Donckery
Clin als een eyl
Long Argrum
Kil mare
Dingle Bay
Swylyvant more
Cods head
Ouc Caſtel
Bierhaven
Verwallen caſt.
Blaſkid
Sermoy
Valencia I.
Baleſchel lagh
Skeryſt
Wemis
C. Dorſes
Dorſes
Sond van Dorſes
Kalf
Koe
Bul
Ctern. Schyllingh
Middel Skyllingh
Great Schyllingh
Schellys hid
Y. Caſtele hid
Mesanhed
Croockhaven
Faſtne
Baltamoer
Il Sherke

The ninth Demonſtration.

Where in is

Contained the Deſcription of the weſt Coaſt or poynt of Ireland from Slynehead to Corck Bay.

FRom Slynehead untill you come before the Bay or great inlett of Galloway, the courſe is ſoutheaſt nine leagues, where lye three great Iſlands, called the Iſlands of Aron, the ſouthermoſt is greateſt, the channell betwixt the northermoſt and the middlemoſt, is called the ſound of S. Gregory, which is on both ſides cleane without any foule ground, ſo that men may turne in too & againe from the one Iſland to the other, without feare of taking any hurt. The north ſide of the middlemoſt Iſland is nothing elſe but faire ſteep rocks: when you are come within the Iſlands, you muſt ſhun the middlemoſt, becauſe of a little riffe that lyeth off it.

Men may alſo ſayle to the northwards of the northermoſt Iſland, into the great Bay of Galloway, likewiſe alſo to the ſouthwards of the ſouthermoſt, to wit, through betwixt the ſouthermoſt Iſland, and the maine land, but that Iſland is foule at the ſouth end of it, and therefore you muſt runne in alongſt cloſe by the ſouth ſhoare, or at leaſt leave two third parts of the channell towards the Iſlands, as well in ſayling in as ſayling out.

Somewhat within the Iſlands, on the ſouth ſide lieth a high black point, called Blackhead, you muſt beare into it, and alongſt by it in, whether you come in at the ſouther channell, or through S. Gregories ſound, or elſe in at the norther channell, for the north ſide of the bay is foule and rocky. About 2 great leagues n. e. from Black-head, lieth an Iſland, called Motton-Ile, under it on the eaſt ſide you muſt anchor in a poole, in 5 or 6 fathom.

You cannot ſayle further up to the northwards into the River with ſhippes, but onely with boats. A northeaſt and ſouthweſt moone maketh there full ſea, and it floweth there ſo ſtrong in the baye, that the rockes which at low water are above water, at high water you may ſayle over them; at low water of ſpring-tydes, the grounds fall dry w. ſ. weſt from Motton-Iſle, a great league & a halfe off, moſt all rocky and foule ground.

When you ſayle from Blackhead towards Motton-Iſland, you muſt take heed of the north ſide, and edge over moſt towards the ſouth ſide. About halfe wayes betwixt them both, lyeth a plate or ledge neareſt the north ſide, you muſt goe in alongſt by it to the ſouthwards.

From the Bay of Galloway to Lupiſhead at the north poynt of the Haven of Limbrick, the courſe is ſ. ſ. weſt, 11 or 12 leagues. About halfe wayes betwixt them both, lyeth a little Iſland that is foule round about with ledges of Rocks that lye of to ſeawards a league and a halfe a ſeaboard the land.

To the ſouthwards of the point Lupiſhead goeth in the Haven of Limbrick. Foure leagues eaſt northeaſt within the foreſayd point, lyeth an Iſland, called Seatrick, you muſt ſayle alongſt without it to the ſouthwards, & leave it on the larbord ſide in ſayling up. At the eaſt ſide of that Iſland is a good road. About halfe wayes betwixt that Iſland and Lupiſhead, lyeth a ſhoale which you muſt ſhun, and ſayle alongſt to the ſouthwards of it. From the Iſland Seatrick unto Lumbrick, are more 12 or 13 leagues, firſt from thence to the Iſland Quoine 4 or 5 leagues, there are two little Iſlands, you muſt ſayle cloſe alongſt to the northwards of them: from thence eaſt northeaſt unto a great rock, called the great Beefe, and then ſoutheaſt unto another great rock, called the little Beefe.

When you are come before the towne in the Haven, you muſt make faſt on the Caſtle with three or foure Cables. For there goeth a very ſtrong tide as well of flood as of ebbe. An eaſtnortheaſt Moone maketh there full ſea.

From the Haven of Limbrick to the haven of Smerrick the courſe is ſouthweſt eight or nine leagues, betwixt them both lyeth the coaſt with a great Bay, where in lye ſome little Iſlands, called the Hoggs. Smerrick.

A little to the eaſtwards of Smerrick lieth Sinbrandonhil, a very high hill, which lyeth in hight very much above all other lands thereabouts, they that come out of the ſea from the weſtwards, ſhall ſee that hill firſt before any other Land, and thereby eaſily know it: Men may ſee it at ſea in the offing, 12, 14 and ſometimes 16 leagues off, according as the weather is cleare. Sinbrandonhill.

Foure or 5 leagues weſtſouthweſt from Smerrick, a little off from the land lye 4 or 5 Iſlands, being high round Hills and rocks called the Blaskeys, with ſome other rocks and little Iſlands about them. The Sound betwixt them and the maine land, is called the Sound of Blaskeyes, lyeth through neareſt n. n. w. and ſ. ſ. e. Hee that is bound to the northwards, may anchor at the ſouth ſide before the ſound for weſterly and northerly winds, and not be in-bayed upon any lee ſhoare: For if the winde ſhift eaſterly, hee may either goe throug the ſound, or elſe goe about a Seaboard the Blaskeys. If the wind ſhift weſterly or ſoutherly, he may run through the Sound, and further his voyage. There runneth through a very ſtrong tyde, as well of the flood as of the ebbe, which muſt be conſidered. Blaskeyes.

Six leagues to the ſouthwards of the Blaskeyes lye three great Rockes called the Skellocks, the eaſtermoſt about a league, and the weſtermoſt two great leagues a ſeabord the land, when you come from the ſouthwards & ſee them firſt, they ſhew like ſayles of ſhips. Betwixt the Skellockes & the Blaskeyes goeth in a great broad Bay deepe into the land, called Dinglebay, with divers havens in it. Skelloks. Dinglebay.

About a league and a half from the Sound of Blaskeyes lyeth a haven called Ventrie, a great league to the eaſtwardes of it another called Dingle, or Dingle Couch, it lyeth north and by weſt in, at the weſt poynt of it lyeth a rocke called the Crow, which is clean round about, ſo that men may ſayle round about it on both ſides, without taking any hurt, at high water with ſpring-tydes, it floweth even under water. This haven of Dingle and the Skellockes, lye northeaſt and by north, and ſouthweſt and by ſouth diſtant eight leagues. The Crow.

Northeaſt from the Skellockes, ſoutheaſt from the Sound of Blaskeyes, and ſouth and by eaſt from the Ventrie, lyeth a haven at the eaſt end of the Iſland Valentia, called Begenny, which lyeth eaſtſoutheaſt in, you muſt give the eaſt poynt of the Iſlands a birth off, becauſe it is fowle, and lyeth a good wayes off: there lyeth alſo a ſuncken rock on the Iſland ſide, which you muſt take heed of when you are come within the entry of the haven, you muſt goe eaſt and by north unto the road, which is right againſt a red cliffe that lyeth on the ſouth ſide. Begenny Haven.

The Skellockes and the Cape Dorſey lye northweſt and ſoutheaſt, ſix leagues a ſunder, betwixt them both goeth in alſoo a great broad Sound, northeaſt in, where in lye many Iſlands, havens and roads.

C. Dorſey

C. Dorsey. C. Dorsey is an Island within, which men sayle and ryde under. For to goe in there from the southwardes, you must give the east side a birth, that is, the side of the maine land which is foule, & run in alongst by the side of the Island, untill you be come within, and anchor there.

Bull, Cow, Calfe rockes. Whithout the Cape Dorsey lye three great rocks, the outermost or the westermost is called the Bull, the middlemost is called the Cow, and the other the Calfe, they are clean round about, so that men may sayl there through between them, without feare of any danger, there is nothing that can hurt but men may see it.

Mizanhead. About six leagues eastsoutheast from C. Dorsey lieth the poynt Mizanhead, betwixt them both goeth in a great Bay or river deepe into the land (with divers havens & roades) called the Bantry.

Three Castles. A great league to the northwards off Mizanhead, lieth a poynt, called the three Castlehead, upon it standeth three flat Towers, but you can hardly see them except they be neere the land, also a great league more to the northwardes, lyeth a small point, called Sheepshead. Betwixt these two poynts goeth in a great broad Bay, called Dounams Bay, there is nothing to doe nor to fetch, but it is a fit place too save ships, and all over good anchor ground.

Sheepshead.

Beerhaven. From Sheepshead to Beerhaven, the course is north and by west, or somewhat westerly about two great leagues, it goeth in between a Island on the east side, and the main land towards C. Dorsey on the west side, it is about a great Musket shot broad, the foresayd Island on the east side is called the Island of Beer-haven, and is about two leagues long. For to sayl in there you must keepe the mid way, in the entry of the haven it is clean, without any fowle ground: after you are come in, there standeth on the larboard side a ruined castle, and a little further are two little rivers, close one by the other, between these 2 little rivers stand some Fisherhouses. Men may saile into the foresaid little rivers, they are deepe enough, but commonly men doe anchor before them, or by that foresayd ruined castle, or els somwhat further in, it is all over good anchoring, and cleane ground, except right against the foresayd little rivers, lye some rocks about the middle of the channell, which at high water are under, and at low water lye above water, these onely must be shunned, but men may goe on either side of them. Somewhat further in the Bay standeth another castle, called Oldcastle, from thence men may sayle alongst to the northwards of the Island Beerhaven, & come out to the eastwards into Bantry. The Sound on the north side of the Island is large, broad, cleane, 13. 12, and tenne fathom deepe. The east poynt of the Island is a sharpe poynt, and very fowle, there lyeth of a ledge of rocks, where of some lye under water & some above water, at low water but the side of the maine is cleare & cleane. In this entry lye also 2 great rockes high above water, but clean round about, men may run through between these rocks, or to the southwards, betwixt them and the foresayd ledg of rockes or also to the northwards alongst betwixt them and the maine land, as well in comming in as in sailing out, there is no danger more then men may see.

Road in Beerhaven.

The Whiddy. From Beerhaven to the north poynt of the Island Whiddy, lyeth the Bantry e. n. e. and northeast and by e. 6 or 7 leagues: over against Beer-haven in the middest in the farreway, it is deepe 40. 36. and 30 fathom, within the Island, 15 and 16 fathom, but further in towards the Island Whiddy, it is againe 20 & 25 fathom deepe: men may sayle round about the Island Whiddy, (which is about a league long) but to the northwards it is best.

For to sayle in about to the northwards, or to the eastwardes, men may goe in close by the north or east point, but a little within the point, lyeth a little ledge of rockes, a little musket shot off from the shoare, which at high water lyes under, but at halfe ebbe beginneth to come above water, that onely is there to be shunned, being passed that, you may anchor all over. About that foresayd poynt lye two small Islands, by the greater men may sayle alongst on both sides of it, either within it or without it, untill you come before a Gentlemans-house which is white, upon the Island Whiddy, and anchor there against it in 3 or 4 or 5 fathom, so deepe or so shallow as men will, according as men desire to ride neere or far from the shoare, it is there all over clean ground.

For sayle to the fourbwards Whidd. He that will sayle into the s. poynt of the Whiddy, had need be very well acquainted, it is there to the southwardes betweene the Whiddy and the maine land, at most places fowle and stony. From the west side of the Whiddy, lye also some fowle ground & rocks, somewhat off the Island to seawards, some above, and some under water.

The Abbey. To the southwards of the Whiddy upon the maine land standeth a Friery or Abbey, called by the Irish the Abbey, right against it, is the common road, & it is very good ground in 4, 5 or 6 fathom, according as you shall ride farre or neere to the shoare, to the northwards lyeth a little Island so low in the middest, that at a spring tide the sea floweth over, and devideth it in two.

A little league to the eastwards of the Abbey lyeth a little towne upon a little river called Balgobben, at high water men may goe up there with their boat, but at low water it falleth dry.

Longerf. A great league from the east poynt of the Whiddy, westnorthwest, lyeth a haven called Longerf, when you shall sayle from the foresayd poynt towardes it, you shall meete right in the fareway, about halfe wayes over a great rocke, which men may sayle about on both sides, but it is best on the off-side is cleane and cleare, but on the inner-side lyeth some fowle ground. He that will sayle through on the inner-side, had need to be very well acquainted. The foresayd haven of Long-erf lyeth n.n. west: Even within it in the entrance on the starboard side, lyeth some fowle ground, which at low water (at the Spring tydes) may be seen drye, these must beshunned, or els it is there within all over good onchoring and good ground, there is no more danger, but men may see it.

When a man is neer the Island Whiddy, about the middest of the Bay, he cannot see the land without the Island Beerhaven on the west side of the Bay, because it falleth a way so alongst to the westwardes.

From Mizanhead unto C. Cleare, the course is east and by south distant seven leagues. About three leagues within or to the eastwards of Mizanhead, northwest from C. Cleare, lyeth a haven called Croockhaven. He that commeth from the east, and is bound in there, must runne alonst by C. Cleare, up about it to the northwards, so farre untill he may see through into sea to the northwards of the Island of C. Cleare, as through a hole, and set then his course westnorthwest, keeping that foresayd hole (to the northwardes of C. Cleare) open, then he shall fall right with Crookhaven, which lyeth in w. s. west. And there he may anchor before the little town in three fathom, and two fathom and a halfe. It was wont here to fore to be deeper there, but it is spoiled most by casting of ballast, men may also anchor further out then before the towne, there it is deeper, and all over cleane ground.

Crookhaven.

Two little leagues west and by south from C. Cleare, lyeth a high steepe rock alone in the sea. called Fastney, which sheweth at first sight like unto a sayle, north 3 or 4 leagues, from this rock lyeth a haven, called Schoolhaven.

Fastney rock.

Schoolhaven.

A little to the eastwardes of the Island of Cape Cleare lyeth another Island, called Isle Sherk. To the eastwards off it, betwixt that Island & the maine land goeth in a haven called Baltemoore haven: It is somewhat narrow at the mouth of the haven, but within the mouth the haven, it is large and broad, there may you anchor on both sides where you will, and lye land-lockt for all windes. On the west side within the haven standeth a Friery, close before it you may anchor in five and sixe fathom; in the middest of the haven, it is sixe and seven fathom deepe. A little to the northwardes of the foresayd Friery standeth a Castle upon a poynt. In the mouth of the haven lyeth a suncken rock, neerest to the east side, and within in the middest of the haven lyeth a rocke, which

Isle Sherk.

which at high water lyeth under, & at low water lyeth above water, there is nothing els that can hurt. A little to the eastwardes without the haven, lyeth another rock sixe or 7 shippes lengths from the shoare.

To the northwards of the Island of the Isle Shercke, men may goe to the westwards through betwixt Isle Shercke, and the Island Spain, and come out againe into sea by C. Cleare, but it is to bee done onely with small shipping, and yet not without danger. Betwixt Isle Sherke and Spain, is at halfe flood not more then 12 or thirteene foote water. At divers other places betwixt these Islands, it is rocky and shoale, so that it is not good to goe through within, except men bee very well acquainted, and yet at high water and springtydes.

A little league to the eastwards of Baltemoore lye the Stagges, an English mile from the shoare, they are five or sixe high steepe rockes. When men come from the eastwards alongst by the shoare, and get first sight of them, they are like unto some spirie towers together, men may sayle through betwixt them and the maine land, it is there large and broad enough.

Northeast about 2 leagues from the foresayd Staggs, lyeth Castle-haven, without it on the east side lyeth a little Island, you must leave it on the starboard side in sayling in, and another little flat Island on the larboard side, that lyeth so close to the land, that at low water men may goe dry-foot over from it to the maine land. Within the haven standeth a little Chappell, when you will sayle in there, you must run in right with it, close alongst by the foresayd little Island on the east side: When you are come in, thwart of the Chappell, you shall see a Castle on the west side, over against that Castle you may anchor in 12 fathom.

From Castle-haven unto the Oldhead, the coast lyeth most eastnortheast and w. s. west, but C. Cleare and the Oldhead lye northeast and by east, and e. n. east distant 14 leagues.

About halfe wayes betwixt Castle-haven and the Oldhead lyeth a high poynt, called by the Irish, Kedonetedo, there by it on the west side is a good haven, called Clandore: For to sayle in there, you must run in alongst close aboard by that foresayd high land on the east side; for to shun a rane of rockes that lyeth on the w. side, and lyeth off somwhat towards the east side, when you are come in, you may anchor before a Castle in 5 or 7 fathom.

The Oldhead or C. de Velho, is a poynt that lyeth out farre without the other land, the outermost south end of it is very high and steepe, when you are come alongst the shoare from the east or from the west, and see it first, it seemeth to bee an Island, upon the top of it standeth a ruined castle with three Towers, whereof the middlemost is the highest. On both sides of this outlying poynt men may anchor so deepe or shoale as they will.

About two leagues north and by east from that poynt lyeth the haven of Kinsale, lying in northnortheast, you may sayle in there, keeping the middle of the channell, there is no danger, neither without not in the harbours mouth, but one suncken rock close by the east poynt. When you come in from the Oldhead, or from the southwardes, and you keep an old ruined castle (that standeth within the haven on the east side) even without the Innermost east poynt of the haven, then you shall not come neere that rocke to take any hurt of it. About a great halfe league to the eastwardes or the havens mouth, lye two great black rockes, the one somewhat further from the shoare then the other. When you come from the eastwardes, and you will goe in close about the east poynt, and you keepe the southermost (that is the greatest) right on the east poynt, then you shall go through betwixt the suncken rock & the poynt: But if you keepe the northermost (or the smallest) a little without the foresayd poynt, so long untill you have brought the foresayd old ruined Castle, without the innermost poynt, then you shall goe alongst without it, and then in the midst of the channell alongst by the easterne shoare. A little past that foresayd old ruined Castle, standeth a Castle on the west side upon a poynt, there lyeth off a shoale, which must be shunned, and therefore you must keep close alongst by the easter shoare, until you be gotten about the shoale of the Castle, and then westwardes up unto the Kay of Kinsale, there you may anchor in eight or nine fathom, and lye landlockt for all windes. The towne Kinsale lieth a little to the northwardes in a bay, where it is oasie soft ground part where of falleth dry at low water.

Foure leagues to the eastwardes of Kinsale, lyeth the haven Corck, betwixt both about a league to the westwardes of Corck, you shall see (sayling alongst the coast) two steepe hommockes like Towers in the land, not farre one from the other: these are notable marks for to know the coast. When you are thwart of the eastermost, you may see the havens mouth of Corck, that lyeth in n. northwest; within it is wide and broad, and goeth up into the land with a broad river. On the east side, somewhat within is a poynt, where lyeth off a ledge of rocks, which must be shunned. There over against on the west side, somewhat farre in, lyeth another point with an old ruined castle, there also lyeth off a shoale, to the northwardes of it, men goe about to Corck. Within that Castle lyeth a little tyde haven in a sandy Bay. Within the haven lyeth an Island, where men doe sayle round about, & at the south side there of may ride. It is in this Haven of Corck at lowe water, 7, 8 or ten fathom deepe. Corck.

A little without the east poynt standeth an old ruined Castle upon the low land, and somewhat further eastward, a square Tower in a valley. A league to the eastwards of the havens mouth standeth a Tower upon a high poynt, close to the water side, with ten or twelve thatcht houses by it. More over, a league further east, by a smooth poynt, lyeth a long rock growen about with greene, upon the east side of that poynt standeth a flat tower, further, it is to the eastwards all low land, unto the poynt of Jochul.

Of the tydes and courses of the streames.

In all these foresaid Havens maketh high water an e. n. e. & w. s. w. Moone or a poynt later, according as they lye deep within the land.

But a seaboard the coast in the offing, a northeast and south west Moone.

At the Mizanhead, C. Cleare, and the coast to the eastwards, a w. south w. and e. n. e. moon maketh high water, within the Havens and indraughts, a poynt later, to wit, e. and by n. & w. and by s. But in the channell a seaboard the land, a n. e. and s. w. moone.

Without C. Cleare by the land, the flood falleth away e. & the ebbe w. but to the e. wards of C. Cleare e. n. e. and w. s. w.

On the south coast of Ireland an e. n. e. and w. s. w. Moone maketh high water, within de Havens a poynt later, to wit, an e. and by north, and w. & by south Moone: but in the offing a seaboard a south w. and north e. Moone.

Betwixt C. Cleare, along the Coast before Waterford into the poynt of Carnaroort, de flood falleth alongst the coast e. n. e. and the ebbe w. s. w.

Of the Depths.

Betwixt C. Cleare and the Dorseyes, men may see the land in 58 and 60 fathom.

From C. Cleare to the e. wards unto Waterford, men may see the land in 54 fathom. The most part of the south coast of Ireland, men may see it in 35 and 40 fathom. In 35 fathom you shall not be farre from the land. Therefore come no neerer Ireland by night then in 40 fathom.

Courses & Distances.

From Sleynshead unto the Bay of Galloway, southeast, 9 leagues.

From the Bay of Galloway to Lupiſhead the n. poynt of Limbrick haven ſ. ſ. w. 11 or 12 leagues.
From Lupiſhead to Smerrick ſ. w. 8 leagues.
From Smerrick to the Blaskeys w. ſ. w. 4 leagues.
From Sleynſhead to Sinbrandonhill ſouth and by weſt, 22 leagues.
From the Bay of Galloway to the Blaskeyes, ſouth weſt 23 leagues.
From the Sound of Blaskeyes unto the Skellocke, the courſe is ſouth 6 leagues.
From Dinglehaven unto the Skellockes, ſouth w. and by ſouth 7 or 8 leagues.
From the Skellockes unto the Dorſeys, ſ. e. 6 leagues.
From the Dorſeys to Mizanhead e. ſ. e. and ſ. e. & by e. 7 or 8 leagues.
From Mizanhead to Sheepeſhead north, 2 great leagues.
From Sheepeſhead to Beerhaven, the courſe is n. and by w. ſomwhat weſterly, ſcarce 2 leagues.
From Mizanhead to Beerhaven n. and by w. 5 leagues.
From Beerhaven to the Iſland Whiddy, the courſe is e. n. e. and n. e. and by e. 7 or 8 leagues.
From the Dorſeys to Silly ſ. e. and by e. 56 leagues.
From the Dorſeys to Cape de Finiſterre is the courſe ſ. and by e. and ſouth. 173 leagues.
From Mizanhead to C. Cleare eaſt and by ſouth diſtant, 7 leagues.
From C. Cleare to Croockhaven n. w. 5 leagues.
From C. Cleare to C. Veelo or Oldhead e. n. e. and n. e. and by e. 14 leagues.
From Cape Cleare to the Lands-end of England eaſt ſ. e. 53 leagues.
From C. Cleare to Silly ſ. e. and by e. 46 leagues.
From C. Cleare to C. de Finiſterre ſouth 173 leagues.
From Oldhead, or C. de Velho, to the haven of Kinſale, is the courſe n. and by e. 2 leagues.
From Oldhead, or C. de Velho to Corck, eaſt north eaſt 5 or 6 leagues.
From C. de Velho to the Landes end of England ſ. e. & ſ. e. and by e. 45 leagues.

Heights.

C. Clear lyeth in 51 degrees, 12 minutes.
Cape de Velho, or Oldhead lyeth in 51 degrees, 28 min.

How theſe Lands doe shew themſelves at Sea.

The Iſlands, as alſo the maine land by north and by ſouth the Bay of Galloway, ſhew, as you may ſee in theſe 5 following Figures, when as you are right before the Iſland of Aron, which lye before the Bay of Galloway.



North being 8 leagues from you. N. n. e. 10 leagues.

Theſe 4 following figures belong one to the other, as the markes doe ſhew.



N. n. w. 6 leagues the maine Land by n. Galloway. N. 3 leagues.

Betwixt theſe two Iſlands, it is 20 fathom deepe.



The 3 Iſlands of Aron before Galloway.

E. and e. and by n. 4 leagues. E. and e. ſ. e.



S. e. and by ſ. 7 leagues. S. ſ. e. 8 leagues. S. and by e. 9. leagues.



This belongeth to the 3 figures, going before, the AA, BB, CC, one to the other.

N. n. e. 4 leagues. Eaſt 5 leagues. Eaſt n. e. 6 leagues. Being 8 leag. n. e. and by e. from you.



Thus ſheweth the land on the Iſlands betweene Limbrick and Galloway, when as you come out of the ſea.

Being n. e. and by n. 4 leagues from you. N. e. 4 leagues. N. eaſt and by e. 5 leagues.



When as the middeſt of the Iſlands of Aron (which lye before Galloway) is north e. 4 Dutch leagues from you, it ſheweth it ſelfe thus: and that ſoutherly little Iſland ſheweth then low and flat.

C. Kerry, or Sinbrandonhill.

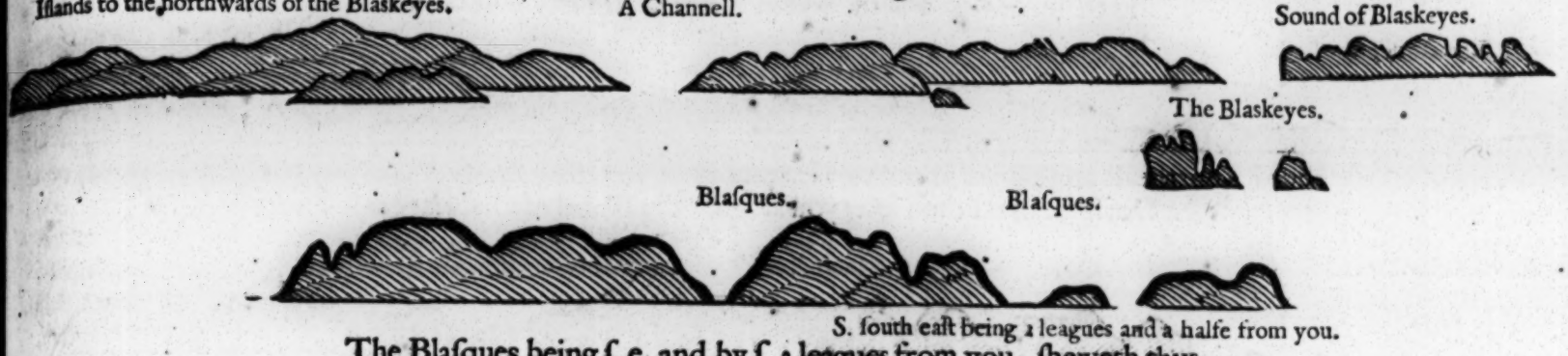


Blaskeyes.

The

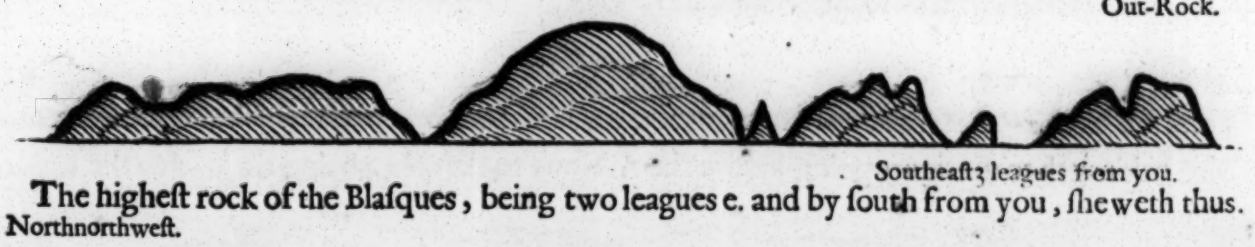


The land of C. Kerry, or Sinbrandonhill (by ſome called Devils hill) unto the Blaskeyes, lying n. e. and by e. 5 or 6 leagues, ſheweth as is Deſcribed out in theſe two figures, when the foreſayd hill of Sinbrandon is e. ſ. e. from you three or foure leagues.



S. ſouth eaſt being 1 leagues and a halfe from you.

The Blaſques being ſ. e. and by ſ. 3 leagues from you, ſheweth thus.



The higheſt rock of the Blaſques, being two leagues e. and by ſouth from you, ſheweth thus.

Northnorthweſt.



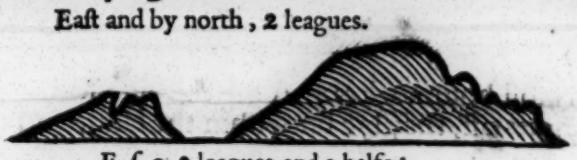
The Blaskeyes, and the land to the eaſtwards of them, doe ſhew themſelves thus, when you ſayle from the Skellocks towards them.



Thus ſhew the Skellockes with the land to the eaſtwards, or to the northwards of them, when you are ſomewhat to the northwards of them, and ſayle alongſt by them.



When you are by the Skellocks, then the Iſlands lying to the northwards and to the eaſtwards of them, ſhew themſelves thus.



E. ſ. e. 2 leagues and a halfe.

The Skellockes, being eaſt and by ſouth from you 3 leagues, ſheweth thus.



Theſe Iſlands lye to the ſouthwards and to the eaſtwards of the Skellockes, the land from thence eaſtward towards the Dorſeyes, is all high broken and very ragged land.



This Iſlands lyeth betwixt the Skellockes, and the Dorſeyes cloſe by the land.



Thus ſhew the Dorſeyes, with the Rocks, Bull, Kow, and Kalfe, which lye without them, they are to the ſouthwards of you.



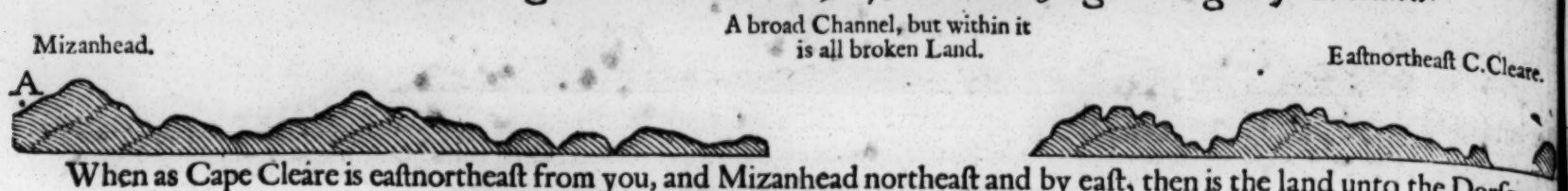
This and the figure following belong at the AA one to the other.



When you are to the eaſtwards or to the ſouthwards of Dorſeyes, they ſhew as is ſhowne out in theſe 2 figures here before. The eaſt end at B ſheweth almoſt like Cape Cleare, being eaſt from you, but it is a higher land.



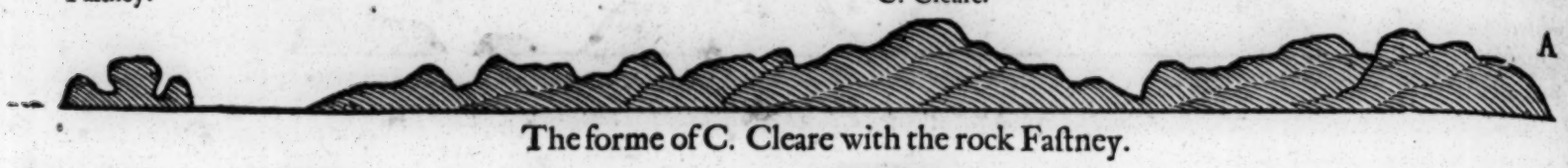
Theſe two figures belong one to the other at the AA.



When as Cape Cleare is eaſtnortheaſt from you, and Mizanhead northeaſt and by eaſt, then is the land unto the Dorſeys in theſe formes, as is ſhewed in theſe two figures here before.



When as Mizanhead is northeaſt and by eaſt about two leagues from you, then ſheweth the land to the northwards of it towards the Dorſeys. And then may you alſo ſee the Iſland of C. Cleare eaſt from you.



The forme of C. Cleare with the rock Faſtney.



Rock a little to the eaſtwards of Baltemore. This belongeth to the figure going before the AA, one to the other, being the land to the e. wards of Baltemore



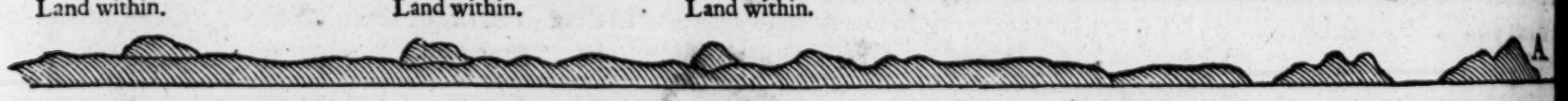
Thus ſheweth C. Cleare, when it is north from you 5 leagues, and there it is 58 fathom deepe.



C. Cleare ſheweth thus, being north and by weſt from you.



The Cape Cleare, being n. w. 7 or 8 leagues off from you, ſheweth thus. If you then beare n. you ſhall fall right with Oldhead, when you come neare the ſhoare, you ſhall looſe ſight of the high land, & it ſhall ſeeme to be all low land.



This followeth the former figure, the eaſtermoſt hommockes at A are the high hils about Jochull, which you may hardly ſee when C. Cleare is n. w. from you 7 or 8 leagues off, they lye far within the land, and the clouds oftentimes hang over them.



When you are before Oldhead two leagues, or two leagues and a halfe a ſeaboard the land, then ſheweth the land to the weſtwards unto C. Cleare, and the land to the eaſtwards of Oldhead, in this forme.



When the poynt of Roſſe is weſt and by north from you, it ſheweth thus.



Thus ſheweth Oldhead when it is w. ſ. w. a halfe league from you, then may you ſee the Haven of Kinſale open.



When Oldhead is weſt 2 leagues from you, it ſheweth in this forme.



The land a little to the e. wards of Kinſale ſheweth thus.



The land to the eaſtwards of Corck towards Jochul, ſheweth in this form



When you are to the eaſtwards of Corck, not far from the land, and that the harbours mouth doth begin to open, then ſheweth t land as it is deſcribed in theſe two figures, at the A, belonging one to the other, being neare the land it ſeemeth to be high land, but a far off (when you can ſee the high inner land, within Jochul over the cliffe land) it ſeemeth to be but low.

The

POICTOV.

Rochelle

BRETAIGNE

HISPANIA.

Vrkania

Duytsche mylen 15 voor een graat

Spaensche mylen 17½ voor een graat

Engel. en Fra. mylen 20 voor een graat

48 47 46 45 44 43 42

De Custen
van
HISPANIA,
als Andaluzia, Portugal,
Gallissien, Biscayen, en
een gedeelt van Vranck:
ryck. beginnen van Hey:
sant tot aen de Straete van
Gibraltar.

T'AMSTERDAM,
By Pieter Goos op't Waater By de N: Brugh
inde Vergulde Seespiegel.

42 40 39 38 37 35 35

GRANADA.

Berja 10
Alboran
C. de 3 Forcas
Alcudia
Madrid
C. de Sacrasief 18
Casasa
Salebrenne
Targuirata
Almunecar 12
Buzema
P. de Torres 12
Bozeca
Atalaja de velez
Velez Malaga 12
Penon de velez
Casasa
Besmeliana 12
Malaga
Nerjalli
C. de Malaga 8
Iangerola 10
Iarga
Marbella 12
Estepona 14
C. Ieruan
Gibraltar
Port Real
C. Carbonera
C. Tarifa
Scena
Schermincheliberg
C. Corres
Ieruan
Tanger
Sparriel
Arsila
P. Sallares
Rodo
R. Vieja Sipiana
S. Lucar
P. de S. Pedro
Diamant
Straet van Gibraltar
P. de S. Sebastiano
Roodian
Cliff
Xaviga
Guelva
Saluces
S. Miguel
Lepe
Almonte
P. S. Maria
Tavila
Fara 10
C. de S. Maria
Setubal
S. Ves
Witte Steen
Palmas
C. de Speichel
S. Vues hoeck
C. S. Vincente
Saluces
Villa Nova
Lagos
Lisbona
S. Giegos
Cascais
C. Roxent
Barlenges
Porta Porta
Aveiro
Camine
S. Nicolas
S. Anthoni
Incasa
Lagos
C. de Monego
C. de Monego
Passage
Penische
Longe Roxent
PRTVGALIA.

45

De Cust van Bretaigne van Heysandt tot aent Eylant Boelyn.

B R E

Heysant

Breesondt

Kaiser

Boldavit

Fontenay

Vrietsche bay

Slaep lakens

Oldgierne

West Penmarkes

Lesou

Brest

Brestwater

Bazyn

Cadsan

Bocx bergh

Colengier

Schermickelborgen

Kimmenesse

Kimmenesse

Kiekens

Le Bel

Halman

Noordhagels

Zuydhagels

Pimes

Blanc bay

Compasses oort

Compasses Suydoost

Compasses Suydwest

Mathieus Closter

Mathieus hoeck

Barbaras bay

Ras van Fontenay

Ras Seems

Duytsche mylen 15 voor een graadt

Spaensche mylen 17½ voor een graadt

Engel. en Fran. mylen 20 voor een Graadt

A I G N E.

Vannes

Auray

Olrey

Hoeck van t Meylandt

S Iohns

Blauet

Morbaem

Arahan

Baerse

Groye

Cardinael

Bel isle, Boelin

S Paul

Oosterpenmarkes

Isles aux moutons

Glimant

Binder

S Gildast

Glaylandt

Thant.

Haghels.

Hanck-
by.

Souther
Hagels.
Norther
Haghels.

Halman.

Con-
quets-
cort.

The ſecond part of the LIGHTNING COLUMNE, OR SEA MIRROUR.

THE THIRD BOOKE, Of the WESTERNE NAVIGATION

Containing

The deſcription of France, Biſcay, Galliſſia, Portugal, and Algarve, from Heyſſant to the Straights of Gibralter.

The firſt Demonſtration.

Where in

Are ſhewed the coaſts of France, from Vſhant to the Iſland of Bel, Iſle or Boelin.

Vſhant. THE Foure and Uſhant lye weſt-ſouthweſt & eaſtnortheaſt diſtant two great leagues. Uſhant ſheweth it ſelfe at ſea at the ſouth-end low, and at the north end going up ſloping, upon the midſt of it ſtandeth a little flat Tower, by which markes it is eaſy to be knowne.

For to ſayle through within Uſhant, the courſe from the Fourne to Saint Matthewes poynt is ſ. ſ. e. 4 leagues. At the poynt of the Foure lye two rowes of little Rockes, and to the ſouthwards of them alongſt the coaſt lye three other heaps of rocks, each of them about an Engliſh mile one from the other: runne alongſt within two Cables lengths by the foreſayd rockes at the poynt, which is much nearer the eaſt ſide, or the maine land, then Uſhant, fur to ſhun the norther Haghels, Haghels. which doe lye betwixt Uſhant and the foreſayd rockes or Ovens, or elſe if you keepe S. Matthewes Abbey in the low valley to the eaſtwards of Conoort, & ſayle ſo right with it, then you run through neareſt the eaſt ſide, and in the middeſt of the channell, betwixt the foule ground Blanck-bay. and the Rockes, untill you come thwart of Blanck-bay, or neare Conquets-oort, there ſtandeth a mill upon the high land alone, when it is eaſt from you; then the Souther Haghels. ſouther Haghels lye weſt and by north from you, and Norther Haghels. the norther Haghels northweſt and by weſt: there is alſo a high flat peece of land, a little to the Abbey of Saint Matthewes; the top if it being even and plaine, like unto a long plaine houſe, when that commeth even without the poynt Conquets-oort, and the foreſayd mill be eaſt and by ſouth, and eaſtſoutheaſt from you, then lye the north Haghels weſt and by ſouth from you, ſoo that when the foreſayd mill is eaſt thwart from you, then are alſoo the Haghels weſt thwart from Halman. you. When Halman or Hayman hill (that is a high rock lying at the eaſt end of Uſhant) commeth over the northweſt end of the northermoſt Mollens, by the French called Cheminees, then are you alſo of thwart of the Haghels.

Hee that muſt turne to windwards from the Fourne towards Conquet, or Saint Matthewes poynt, let him make uſe of theſe markes: In the poynt of Conquet haven, or Con-quers-oort. Conquets oort, are two valleys, the one is great, that is the weſtermoſt, and one little, that is the eaſtermoſt, in manner as is here pourtrayed.

S. Matthews Cloyſter. Conquets oort.



When you runne over to the eaſtwards towards the land, and that the Abbey of Saint Matthewes commeth a Capſtane barrs length to the eaſtwardes off the ſmalleſt valley, according as is ſhewed in this figure, then it is time to caſt about: and when you runne over to the weſtwards towards Uſhant, and that the foreſayd Abbey off Saint Matthewes commeth a little without the poynt off Conquet Haven, you muſt alſoo caſt about, for when the foreſayd Abbey commeth two ſhippes lengths without the foreſayd poynt then are you cloſe by the Haghels. The Norther and the Souther Haghels lye a bout a ſhot of a caſt peece diſtant one from the other.

Two or three Cables lengths thwart from the poynt off Conquet haven, or Conquets-oort to ſeawards lieth a ſuncken rock, which with a ſpring tyde commeth above water, called the Vintner, by the French le Bell. For to avoyd it comming from the northwards, or from the Fourne, and being come from the foreſayd markes (of S. Matthews Abbey in the great valley of Conquets-oort) unto cloſe by Conquets-oort, then run cloſe about by it, alongſt within a Cables length of the poynt, or keepe the Abbey of Saint Matthewes even without the poynt of Conquet-oort, and ſo cloſe about it, within a cables length, as before is ſayd, and then you ſhall leave the Vintner a Cables length or two on the ſtarboard ſide of you, and can take no hurt of it. The Vintner.

When the little Church upon the poynt off Conquets-oort is eaſt from you, then is the Vintner weſt right thwart from you, or elſe when that the Souther-houſes off Conquet, beginne to come without, or to the poynt off Conquet, then you have alſo the Vintner upon your ſide, weſt and weſt and by ſouth from you, a little ſhot off a caſt peece.

If you ſayle into Conquet-haven, then runne about the poynt within a cables length, as is before ſayd, untill you ſee the haven open, then you come againſt the Feneſtiers, which are rockes that lye off about a Cables length from the Eaſt land of Conquet-haven under water. For to avoyd them, runne alongſt by the norther ſhoare, untill you come within the Haven. Betwixt the Feneſtiers and Conquet haven. Feneſtiers.

Blanck Moines. the blanck Moines (that are rockes by Saint Matthewes poynt) is a good road under the Abbey of S. Matthewes, as well for them that are bound to the northwards as to the ſouthwards. If you will goe into this road comming from Conquets-oort, then run right with the blanck Moines, untill that the Abbey of Saint Matthewes be eaſt-ſoutheaſt from you, ſayle then towards it untill you come before the Abbey, and anchor there in ſix or ſeven fathom.

About a league to the eaſtwards of S Matthewes poynt, towards Breſt, lyeth a ſuncken rock, about halfe a ſhot of a caſt peece from the north ſhoare. If you will ſayle into Breſtwater, then goe from S. Matthewes poynt away eaſt and by ſouth, and eaſtſoutheaſt, and keepe the north-end of the ſouthermoſt Mollens, without S. Matthewes point, ſo long, untill that the mill upon the north-land come to the northwards of the trees, then you ſayle alongſt to the ſouthwards of the foreſayd rock, and ſo doing, you can take no hurt off it, but if you bring the ſouth end of the Mollens neare or to S. Matthewes poynt, you ſhall not fayle to ſayle upon it.

For to ſayle to the northwards of the foreſayd Rocke, you muſt runne from S. Matthewes poynt alongſt by the North-land, and keepe the Southermoſt Mollens hidden behinde the great Rocke that lyeth off from S Matthewes poynt, and ſayle then right with the weſt poynt of Bartrams bay, untill that the foreſayd mill ſtanding upon the North-land, commeth to bee northweſt and by north from you, and the trees ſtand northnorthweſt from you, then ſhall you be paſt the foreſayd Rocke, but to runne alongſt to the ſouthwards of it, is beſt and broadeſt. For to ſayle forth alongſt to Breſt (being paſt the foreſayd rock) you muſt run forth within two cables lengths alongſt by the north ſhoare. A little within the eaſt poynt of Cordon, or Claeſdownes, lyeth a rane off Rockes, about the middeſt of the channell in the mouth of Breſt-water, which at low water lye above water, and at high water are under water, called the Baginne, you may runne alongſt on both ſides off it, but to the northwards of it, is beſt, when the ſouth poynt of Breſtwater commeth over the poynt off Crodan, then are you thwart off the foreſayd Bagyne, which lyeth about two Cables lengths from the north ſhoare, runne alongſt to the northwards of it: When the Breſt commeth without the poynt, ſayle then ſoo right to it, you muſt anchor there with an anchor to ſeaward in eight or nine fathom, and with a cable a ſhoare faſt on a tree: When you come within the Bagyne, you may edge up to the eaſtwards, or to the ſouthwards before the river of Landerneau or Lefou, and anchor there under the ſouth-land, in ten, twelve, or thirteene fathom. Before the little towne old Croidan. Breſt-water, or the river of Landerneau, lyeth in moſt eaſtnortheaſt, and it is Pilots water, hee that is bound in there, may take a Pilot to bring him in where hee deſireth to bee: It floweth there with an ordinary tyde, three fathom up and downe, a ſouthweſt and by weſt, and northeaſt and by eaſt moone maketh there full ſea.

Baginne.

Lefou.

If you come to anchor within Breſt, you muſt pay for anchoringe ten ſoubs, and for it you ſhall get a ticket off freedome. If it ſhould happen that you ſhould looſe your ſhippe upon Britaigne, you might there with challenge your goods, elſe they are unfree.

Bartrams Bay. Bartrams bay lyeth about two leagues to the eaſtwards of S. Matthewes poynt, a little league paſt the foreſayd ſuncken rock, there is good anchoring for a north, & northeaſt wind in 10 and 11 fathom.

Croidan. Over againſt Bartrams bay lyeth Croidan or Claeſdownes from Saint Matthewes poynt, ſoutheaſt diſtant about 3 leagues, it is a great bay, for to ſayle from S. Matthewes poynt to Croidan, you muſt keepe the ſouthermoſt Mullens even without the black Moines (that are the Rockes without S. Matthewes poynt) and go away eaſt and by ſouth, and e.ſ.e. untill you come before the bay, & may ſee open into it, then you ſhall ſee a Chappell, or little Church ſtand upon a chindle, run in right with it, anchor thereabouts, in 6, 7, 8, 9, or 10 fathom, there is the beſt road.

Mullens The Mullens are the rockes which lye there to the ſouthwards of Uſhant, and to the weſtwards from Saint Matthewes poynt. Betwixt them and Uſhant lyeth a channell northeaſt and ſouthweſt through, which is in different large and broad, and deepe enough, there remaineth at low water 6 and 7 fathom water. Hee that commeth from the northwards, and cannot ſayle a weather of Uſhant and the Mullens, by reaſon of the flood may run through here, or he that commeth out of the ſea, and with northerly winds, cannot ſayle a weather off Uſhant, may with a flood run through here, and ſo further his voyage, when men runne through here, either in or out, and keep the middle of the channell betwixt both lands they can take no hurt.

From S. Matthewes poynt to the race of Fontenay, or the Keyſer and Lavender, the courſe is ſouth and by e. 6 leagues, betwixt them both lye divers rocks, where of men muſt take good heed, as the Hen with the Chickens, the Collier, the Falconers, Scheminckelborrowes and other more. The Hen with the Chickens, and the middle-moſt Falconer or Foukeniſſe, lye from S. Matthewes poynt ſ. e. & by eaſt diſtant a league & a halfe, but the Collier lyeth from Saint Matthewes point ſ. ſ. e. alſo a league and a halfe.

Henne Chickens.

Falkoners. The Falconers, or Foukeneſſen lye from the weſt poynt of Croidan about weſtſouthweſt an Engliſh mile. The innermoſt or ſouthermoſt Falconer lyeth from the northermoſt ſ. ſ. e. about a halfe league, or two ſhots off a caſt peece, and from Croidan ſouthweſt & by ſouth, & is coverd ad high water. North n. e. a cables length from it, lyeth another ſuncken Rocke, which at low water may even be ſeene. To the weſtwards of the northermoſt Falconer lyeth alſo a ſuncken rock which at low water may even be ſeene.

The ſouthermoſt Falconers.

The Hen Chickens. The Hen lyeth from the Falconers w. ſ. w. about 2 cables lengths, or a ſhot off a caſt peece, it is a round ſharpe rocke, it is round about it deepe and cleane, in 6 and 7 fathom. The Chickens are two ſharpe little rockes, which at low water may even bee ſeene, and lye about the ſhot of a Baſe northnorthweſt from the Hen, and weſt from the northermoſt Falconer.

Scheminkelboroughs. The Scheminkelbroughs lye to the ſouthwards off the Falkoners, men may run through betwixt them in ten fathom, to the poynt of Croidan, there is good road and anchor ground.

If you will ſayle from S. Matthewes poynt to the Race of Fontenay, you muſt goe away ſouth and by eaſt, and bring the mill off Feneſtiers, which ſtandeth upon the eaſt poynt of Couquet-haven, over the poynt of S. Matthewes, a little to the weſtwards of the Abbey, and keepe them ſo ſtanding ſo long as you can ſee them, and you ſhall not come to neare the foreſayd Rockes, to take any hurt off them. When as then you come to the Keyſer and Keyſerinne, firſt give the Keyſer a birth, becauſe off ſome ſuncken Rockes which lye off from the eaſtſide of it under water. From the ſouthweſt ſide of the Lavender runneth off a foule ledge of Rockes, called the Calfe, there the tyde falleth very ſtrong over it, with very great rippeling. This Channell off the Race of Fontenay, lyeth through betwixt the Keyſer and Lavender ſ. ſ. w. & n. n. eaſt. He that will ſayle through here, muſt be very careful to caſt his tides well, for it runneth moſt thwart over this Race, ſoo that with a ſouthweſt wind, and an outfall or ebb, and alſo with calmes, it is very dangerous to come into this Race.

Keyſer.

Laven-der.

Race of Fonte-ney.

Seames. A little to the ſouthwards of the Keyſer, lieth the eaſt end of the Seames, and lye from thence at leaſt three or foure leagues w. n. w. into ſea. A great league northweſt from the weſt poynt of the Seames, lyeth a ſuncken rock, where of men muſt take heed.

And weſtſouthweſt about two leagues from the Seames, lyeth a row of rocks, like a bancke, whereupon it is

it is not deeper then ſeven fathom, but betwixt the rocks & the Seams, it is 50 fathom deepe.

Betwixt the Seames and Uſhant the broad ſound lyeth in e. n. e. to S. Matthewes poynt, and from S. Matthewes poynt w. ſ. w. 5 leagues into ſea.

To the eaſtwards of Fontenay, or the Lavender, lieth the Frieze Bay, there men may anchor for a ſoutheaſt & eaſt wind, in good anchor ground.

To the eaſtwards of the Frieze Bay, lyeth Boldavids Bay a broad deep ſound, lying into the land eaſt north-eaſt. At the eaſt ſide of that haven lye 2 little Iſlands or Rocks, where men may anchor round about them, and lye ſheltred for all windes.

From the Race of Fontenay to the Pennes, the courſe is ſoutheaſt ſomewhat eaſterly about 10 or 11 leagues, betwixt them both lyeth Oldyarne, a good Haven, about 7 leagues eaſt ſoutheaſt from Fontenay. Thwart before the entry of it lyeth a banke where men may run about it on both ſides in 6 fathom.

The ſouth poynt of this Haven is flat, therefore run in alongſt by the north poynt, there is at low water not leſſe then 3 fathom depth. From Oldyarne to the Pennes it is ſ. e. and by ſouth.

If you will anchor before Port Kapſtand, you muſt anchor in 12 or 13 fathom, before the village that ſtandeth upon the high land, about halfe waies betwixt the point of the Race, and the great ſand-bay of Oldyarn, where the little ſharpe Tower doth ſtand, the point of the Race ſhall then lye from you about northnorthweſt, and you ſhall then lye a great half league from the land, further off from the ſhoare it is rocky and foule ground, as ſome ſay. There have ſome nevertheleſſe come to anchor there by night in 3 or 4 leagues from the ſhoare in 25 fathom, but have not received any hurt neither of cables nor anchors.

The weſt end of the Seames, and the Pennes, lie ſoutheaſt and by eaſt, and northweſt and by weſt, diſtant about 13 leagues.

The knowledge of the land betwixt Fontenay and Oldyarne, are two round hills, which men doe call the ſheets, or Slaeplakens, to the weſtwards of them ſtand two Mills. It is a very ragged point, and by theſe foreſaid markes very good to be known. Men may ſee them without the Seames in 55 fathom.

From Oldyarne to the Pennes lyeth the coaſt ſoutheaſt and by ſouth 5 leagues.

The Pennes are very eaſy to be known, for him that hath ſeen them once: upon the ſoutheaſt end ſtandeth a thicke flat Tower; a little to the weſtwards of it ſtandeth a ſharpe tower, and ſomewhat more to the eaſtwards againſt the high land, ſtandeth a village appearing like a caſtle, upon the eaſt ſide there of ſtandeth a flat tower, and there cloſe to the land lye 2 great rocks.

The pennes lye off from the maine land, ſoutheaſt two leagues into the ſea. For to ſayle in there, you muſt come in there from the eaſtwards, and run alongſt by the ſtrand of the maine land, leaving all the rocks on the larboard ſide, untill that you come to a great rock, which you muſt leave on the ſtarboard ſide, and runne about to the ſouthwards of it, being paſt it, edge within it up towards the Northweſt, and you may anchor there a little within, in three fathom at low water, lying there, you can ſee no ſea, but at high water the ſea cometh very much tumbling in through the Rocks: You may goe away from thence at high water ſoutheaſt through the Rocks into ſea, but you muſt take very good heed, becauſe it is there full of Rocks where of ſome are above water, and ſome under water. Without the foreſayd great Rock in the comming in of this haven, it is at leaſt ten fathom deep, ſo that for need men might well ſave a great ſhip there.

From the Pennes to the Glannons or Glenant, the courſe is e. ſ. e. with that courſe you ſhall run alongſt to the ſouthwards of them. Within the Glanons lieth a Haven, called Bindeth, at the eaſt point of that Haven it is full of rocks. For to ſaile in there, you muſt take heed unto theſe marks: there ſtand two Mills farre within the land, bring the eaſtermoſt of the 2 over a little caſtle that ſtandeth upon a point within the Haven, and run in, keeping them ſoo n. and n. e. and by eaſt in, and then you cannot take hurt on neither of both ſhoares, and being come within the haven, anchor before the Town.

Glanons. Glenant. Bindeth.

A league ſouthweſt from Gloylend or Glenant, by the Dutchmen, called the eaſter-Penmarkes, lieth a great Rock under water, but is good to be eſpied, in regard the ſea alwaies breaketh upon it; as well within as without this Rock it is 40 fathom deep.

When you come of from the Pens, with an e. ſ. e. courſe, you ſhall runne alongſt farre enough to the ſouthwards of it. About 2 leagues the eaſtwards of Glenant, lye the Iſlands of Muttons, by the French called Iſles aux Moutons, you may ſayle through betwixt them and the main land, unto Groy or Blavet, alſo you may anchor within them in 10 or 12 fathom, betwixt the land and the foreſaid Iſlands, which are cleane upon the north ſide. Mourons Iſlands.

Betwixt the Iſland Mutton and Glenant lyeth a rock, for to avoyd it (for them which will ſaile through there betwixt them) they muſt leave one third part of the channel towards Glenant, and the other two third parts towards Mutton, and then they may boldly run through there without feare.

From Mutton to the Iſland Groy the courſe is eaſt and by ſouth, upon the outer ſide of Groy ſtand 3 or 4 mills, the eaſt end of it goeth ſteepe downe, and the weſt end ſloping and flat down, thereby it is good to be known. Under Groy is good anchoring for a ſ. w. winde in ſix or ſeven fathom: Under the n. e. point alſo is a good road for a w. ſ. w. & n. w. winde, there is very good anchor ground. At the ſ. w. end runneth off a foule ledge, where of men muſt take good heed. Groy.

Within the Iſland Groy lyeth the Haven of Blavet, which lyeth in about northweſt in 4 and 5 fathom. Upon the weſt ſide of this haven ſtandeth a high ſharpe Tower called Quinperly, from the eaſt poynt runneth off a great ledge of rocks, called the Baers, within it on the eaſt ſide of the entry of the Haven lye two ſuncken Rocks, alſo on the weſt ſide a Rock with a hole, which at halfe ebbe is uncovered, whereof men muſt take very good heed in the comming in; men run in alongſt by the weſt land, for to eſchew the foreſayd ſuncken rock & foule grounds. The marks for to ſayle in there are theſe, there lyeth a little Iſland within in the middeſt of the haven, which you may ſee when you are without the Haven. To the eaſtwards of that little Iſland upon the maine land, ſtandeth an Abbey; bring that Abbey right to the eaſt poynt of the haven, which lyeth within the Baers, and ſayle in with it, untill you come thwart of the eaſt poynt within the Baers, and runne in about by it: being within it, there it is wide and broad, you may anchor there before the foreſayd little Iſland in 5 or 6 fathom, there it is at low water 3 or 4 fathom deepe, or elſe men commonly runne in about, by the poynt, untill they come in the oaze. Blavet.

From the Pennes unto Bell-Iſle, the courſe is eaſtſouth-eaſt twenty leagues, but from Groy to Bell-Iſle it is ſouth-ſoutheaſt five leagues. Bell-Iſle hath at the northweſt end a ſteepe poynt, lying out with a great ſaddle, thereabouts ſtand alſo ſome little houſes, and the end goeth very ſteepe downe.

When as Bell-Iſle lyeth n. n. e. from you, the weſt end ſheweth it ſelfe in three parts: the weſtermoſt where of is a great rock, which floweth at a very high water allmoſt under, at the eaſt end there divideth it ſelfe off alſo a great rock: by theſe foreſayd marks it is indifferent well to be knowne, men may ſee Bell-Iſle out of the ſea in 55 fathom. At the ſ. ſide lye off many rocks & little Iſlands. Road to know Bell-Iſle.

If you will ſeeke a roade under Bell-Iſle, then you muſt give the northweſt end a good birth, off from it lyeth a ſuncken rock under water, a good wayes from the land: being come within it, ſayle then within two Cables lengths Road under Bell-Iſle.

lengths alongst by the land, within a Base shot about by the north poynt, untill you come before the village with the little sharpe Tower, called Pauls, there standeth a castle upon the poynt to the westwards of the foresayd little Tower, anchor within that poynt in nine or ten fathom, there you shall lye landlockt for a south, southwest and and northwest wind. If it blow more northerly, you must shift, and runne before the east end (which is about halfe a league broad) and anchor there in ten or eleven fathom. This Island lyeth about southeast and northwest according as the winde bloweth, men doe shift there from one road to another, it is there every where good riding.

Within the Island Bell-Isle, to wit, betwixt Bell-Isle, and the maine land lye many little Islands, where at divers places men may sayle through to the Rivers of Vannes, or Morbeam, Roche Barnard, & the river of Nants, called the Loire. Of these Islands are three the principall, the
Cardinall. eastermost is called the Cardinall, the east poynt where of, and the east poynt of Bell-Isle lye one from the other direct east and by north, and w. and by south about 4 leagues. The middlemost is called by some also the Cardinall, or else together with the eastermost the Cardinalls. This hath a good Haven on the north side, going in by a
Sand-banck. great Rock. From the n. w. poynt of the northermost, runneth a sandy strand unto the maine land, against the poynt betwixt Blavet & Morbeam, so that men cannot sayle there betwixt that and the maine, but at high water it is most covered, and at low water it lyeth most drye, at low water men may goe over there on foot from the Island to the maine land.

He that commeth from the west, and is bound to Morbeam, Roche Barnard, or other places thereabout, must run to the southwards of it, if he will not sayle about to the southwards of Bell-Isle, he may sayle through betwixt the northermost and the middlemost Island, and also he may sayl through betwixt Bell-Isle and the foresayd Islands, about to the eastwards of the Cardinall. The channell there betwixt them both, is above a league broad and cleane, it lyeth through e. s. e. and by east, men may run alongst by the Cardinals either by night or by day in 8, 9, and 10 fathom, all cleane sandy ground.

For to sayle through betwixt the westermost, which is fast at the north end with the strand to the maine land, and the middlemost Island, the course is from the n. w. end of Bell-Isle e. n. e. A little from the east-end of the foresayd westermost Island, lyeth a great round rock, which you must leave on the larboard side, & run alongst by it, within two or three Cables lengths, and then you shall leave on the starboard side to seawards of you a great many rocks, some above & some under water, which lye towards the other Islands, which you must give a greater birth to, then to the foresayd great rock. From this foresayd channell to the river of Morbeam, or S. Jolms, the course is n. e. or n. e. and by e. or els if you run about to the eastwards of the Cardinall, and are bound to Morbeam, then goe away from the east poynt of the Cardinall first n. w. and n. n. w. and you shall have then in that fareway 8, & 9, fathom depth, goe then by little and little more northerly right with the poynt, which lyeth to the westwards of S. Jolms, there runneth off the sayd poynt of S. Jolms, a ledge or riffe of rocks allmost a halfe league in to the sea, which you must give the west poynt a birth to, and run in alongst by the east shoare which is flat, and lieth from the Tower of S. Jolm to the River of Vannes n. w. & s. e. but you must be sure to reckon your tyde well in this Channel, for it runneth in and out the River of Vannes so strong that you cannot sayle in with an ebbe, although it blow a storm, likewise doth it to the contrary with the flood, therefore you must sayle in there with a still water. At the middle poynt where the river doth devide it selfe in two (whereof the one runneth to Vannes, & the other, to Auray) lye many rocks, the most part under water, which you leave on the starboard side when you are bound to Morbeam or Auray, and on the larboard side when you are bound to Vannes when you are come from so far within, that the Tower of Morbeam is w. from you anchor there in the middlest of the haven, in 9 fathom, and then shall Auray the innermost little Tower lye n. n. w. from you, & the other little Tower north and by e. but the poynt of Mayland e. s. e. The west shoare thwart of it is very steepe, easie and soft, you can take no hurt of it, although you sayled right against it.

The east poynt of the Cardinall, and the entring of the Haven of Morbeam lye northnorthwest and s. s. e. one from the other.

Of the Tydes and Courses of the streames.

Without Ushant a westsouthwest and eastnortheast Moone, and within the Trade a southwest & by west Moone maketh full sea.

At S. Matthewes poynt, a southwest and northeast Moon maketh highest water.

In the broad Sound, betwixt Ushant and the Seames a w. s. w. and e. n. e. moone maketh the highest water: The flood falleth very strong upon Ushant, and to the southwards of it through the Mullens. Thwart over the Trade, towards the Backovens. Likewise in through the Broad Sound unto Brest. Also alongst by S. Matthewes poynt towards the Fourne, or Backovens, with great rippeling. He that commeth sayling about Ushant, must reckon thereupon.

In the Race of Fontenay a southwest and by south, and northeast and by north moon maketh full sea. The flood falleth very strong through betwixt the Keyser, somwhat thwart over towards the Lavender, with very great rippeling over the Calfe, (that is the ledge of Rocks, which lyeth off from the Lavender) & from thence forth north, and north and by west inwards to S. Matthewes point: With calms men must take very good heed not to be miscaried away with the current. With stormy weather out of the north or south, it is not without danger to come in this channell, espicially with an ebbe or out-fall.

On these coasts of Britaigne, and the Islands thereabouts, a southweft and n. e. Moon maketh the highest water: but within the havens, rivers, indraughts, & bayes, a s. w. and by w. and n. e. and by e. Moone, or a poynt later, according as the havens or rivers doe lye deepe in the land. Men doe not reckon there any setting or running of the streames, for the flood commeth (through the swelling of the great Ocean) right against the coasts, and so runneth onely into the havens, the Ebbe contrariwise goeth thwart from the shoare to seawards, when it falleth soo that men cannot perceive any course off streames except it bee a little through, or about some points off Islands.

On these lands, as on all the coast off Britaigne, a n. e. and southwest moon maketh high water, and within the havens, rivers and indraughts, a poynt or two later, according as they lye far within the land.

On the Coastes and Islands a s. w. and northeast moone maketh high water, within the Haven & Rivers a point or two later, according as they lye farre within the land.

Of the Depths about these places, and in what depths men may see the land.

The Backovens, or the land of the Fourne men may see in 50 fathom.

Ushant being about s. from you, you may see in 50 fathom.

Southwest from Ushant 5 or 6 leagues of it is deepe 75 fathom, and then you may see the land from the poop.

In the Broad Sound it is 45 fathom.

A little without the Seames, about a league, it is deepe 50 fathom.

Men may see the Seames and the Sheetes, or Slaeplakens in 60 or 65 fathom.

Betwixt Ushant and the Seames in the fareway it is deepe 55 fathom.

Thwart of the Pennes and the Glanons men may see the land in 55 and 60 fathom.

Bell-

Bell-Iſle men may ſee from below in 55, but under the top in 60 fathom.

How theſe landes doe lye one from the other, and from other lands.

From the Fourne to S. Matthewes poynt ſ. ſ. e. and ſ. e. and by ſouth 4 or 5 leagues.
From S. Matthewes poynt to Croydon, or Claeſdowne e. ſoutheaſt 3 leagues.
From S. Matthewes poynt to the Race of Fontenay, or the Keyſer, ſouth and by eaſt 6 leagues.
From Uſhant to Portland northeaſt 53 leagues.
From Uſhant to the Steart northeaſt and by north 39 or 40 leagues.
From Uſhant to the Lizart north 29 leagues.
From Uſhant to Silly northweſt and by north and n.n. w. 34 leagues.
From Uſhant to Cape Cleare in Ireland northweſt 78 leagues.
From Uſhant to the Iſland of S. Michaels, ſ. w. and by w. 360 leagues.
From Uſhant to the Cape Finiſterre ſouthſouthweſt weſterly 121 leagues.
From Uſhant to Ciſarga ſouthſouthweſt 110 leagues.
From Uſhant to Cape Prior ſ. ſ. w. 105 leagues.
From Uſhant to C. de Pinas ſouth 93 leagues.
From Uſhant tot Laredo ſ. ſ. e. 104 leagues.
When men ſail away ſ. and by e. from Uſhant, then they run a little without the Seames.
From the Race of Fontenay to the Pennes ſoutheaſt, ſomewhat eaſterly 10 or 11 leagues.
From Fontenay to Oldyarne e. ſ. e. 7 leagues.
From Oldyarne to the Pennes ſoutheaſt and by ſouth, five leagues.
From the weſt end of the Seames tot the Pennes e. ſ. e. & by eaſt 13 leagues.
From the Seames to the Band or Craghe of Oleron ſ. e. and by eaſt 68 leagues.
From the Seames to the Bayon in France ſoutheaſt ſomewhat ſoutherly 102 leagues.
From the Seames to S. Sebaſtians ſoutheaſt and by ſouth 102 leagues.
From the Seames to Bilbaw ſouthſoutheaſt, eaſterly 96 leagues.
From the Seames to Saint Andero ſouthſoutheaſt, 92 leagues.
From the Seames to Cape de Pinas, or Tores, ſouth 81 leagues.
From the Seames to Ribadeus ſ. & by weſt, 89 leagues.
From the Seames to Cape de Ortegall ſouthſouthweſt, ſoutherly 84 leagues.
From the Seames to C. Finiſterre ſouthweſt & by ſouth, ſoutherly 112 leagues.
From the Seames tot Silly, Northnorthweſt, five and forty leagues.
From the weſt Pennes, tot the eaſt Pennes or Glannons, eaſtſoutheaſt 6 leagues.
From Glannons or Gloyland to Groy, eaſt and weſt, nine or 10 leagues.
From the eaſt end off Groy to the weſt end of Bell-Iſle, the courſe is ſouthſoutheaſt 5 leagues.
From Glannons, or Gloyland, to Bell-Iſle, ſ. e. and by e. ſomewhat eaſterly 13 or 14 leagues.
From the northweſt end of Bell-Iſle to the ſoutheaſt end, the courſe is ſoutheaſt and by eaſt 5 leagues.
From the northweſt end of Bell-Iſle to the ſoutheaſt end, the courſe is ſoutheaſt and by eaſt 5 leagues.
From the Weſt Pennes, to Bell-Iſle eaſtſoutheaſt 21 leagues.
From the eaſt end of Bell-Iſle to the eaſt end off the Cardinall eaſt and by north 4 leagues.
From the eaſt poynt off the Cardinall, to the entring off Morbeam n. n. w. 4 leagues.
From the weſt Pennes to Viverus ſouthſouthweſt 84 leagues.
From the weſt Pennes to Syſarga ſouthweſt and by ſouth 102 leagues.
From Groy to Viverus, ſouthweſt and by ſ. 90 leagues.
From Groy to Cape de Finiſterre, ſ. w. 123 leagues.

Heights.

Uſhant lyeth in	48 degr. 30 min.
The Seames lye in	47 degr. 58 min.
The Iſland Bell-Iſle lyeth in	47 degr. 5. min.

How theſe Lands doe ſhew themſelves at Sea.



When Uſhant is ſouth and by weſt from you 4 leagues, it ſheweth it ſelfe in this forme.



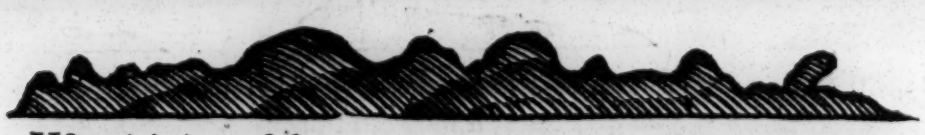
ant, being ſ. and by e. from you 4 leagues, ſheweth it ſelfe thus.



Thus ſheweth Uſhant, being ſ. e. from you 4 leagues.



Uſhant, being ſouth and by eaſt from you 3 leagues, ſheweth it ſelfe thus.



Uſhand, being eaſt from you 2 or 3 leagues ſheweth it ſelfe thus.



Thus ſheweth the Sheets, or Slaeplakens, with the Pennes, as you ſayle alongſt by them, and that they are about 4 leagues thwart from you.



Uſhant, being eaſt and by ſouth, and e. ſ. e. 3 or 4 leagues from you, ſheweth it ſelfe in this forme.



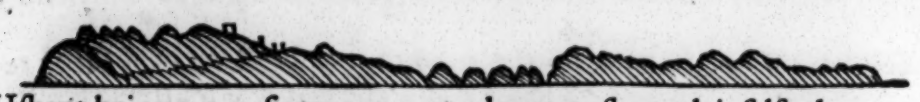
Thus ſheweth Uſhant, when it is eaſt and by ſouth from you foure or 5 leagues.



When Uſhant is 4 leagues eaſt from you, it ariſeth in this forme.



Uſhant being e. n. e. and by e. from you 5 leagues ariſeth thus.



Uſhant being e. n. e. from you 2 or 3 leagues, ſheweth it ſelfe thus.



Uſhant being e. n. e. and by e. from you, ſo farre as you may even ſee it from below, ariſeth in this forme.



When Uſhant is northnortheaſt from you, it ſheweth thus.



Uſhant being n. e. and by eaſt 3 or 4 leagues from you, ſheweth it ſelfe as is here demonſtrated.



Thus ſheweth the land betwixt the Pennes and the Glannons, when it is n. e. and by e. 5 or 6 leagues from you. This hill is very eaſy to be knowne, it overtoppeth in height all the land thereabouts. The Pennes are then n. n. weſt from you 4 or 5 leagues.



Thus ſheweth the land of Glannons, when you ſayle alongſt by it.



The land to the eaſtwards of Gloyland or Glannon ſheweth thus, when you ſayle alongſt by it.



Groy, being e. n. e. 5 leagues from you, ſheweth it ſelfe in this forme.



Groy, being north e. from you ſheweth it ſelfe in this forme.



Thus ſheweth the w. poynt of Groy, when it is three or foure leagues northeaſt from you.



Thus ariſeth Bell-Iſle, when the n. w. end is eaſt from you 4 leagues.



When Bell-Iſle is northeaſt from you 4 leagues, it ſheweth thus.



When Groy is northnortheaſt from you 4 leagues, it ſheweth thus.



When the north w. poynt of Bell-Iſle is eaſt and by north from you 4 leagues, and the ſouth e. poynt is eaſt and by ſouth, and eaſt ſouth e. then it ſheweth thus: When as you ſayle towards it, and you come neare the land, then the pieces which lye off from the n. w. end, at leaſt come to be faſt unto Bell-Iſle.

BRETAI:

GNE.

PO

T

De Riviere Loire

Leman

Roche Bernard

S. Nabart

De Rivier Villaine

Croisyck

Badjoux

Les Pierres

Pierre Bard

Pierre mon

Bongas

De Grave

Noumonster

S. Hilarie

S. Nicolas

Armentiers

Bosch

Isle Lge

Le four

Piquelier

Cardinael

S. Island

Isle Dieu

Heis

Bel Isle

Boelyn

Duytsche mylen 15 in een graadt

Spaansche mylen 17½ in een graadt

Engel en Fran. mylen 20 in een graadt

De Custen van POICTOU, XANTOIGNE En een gedeelt van Bretaigne van Boelyn tot aen de Rivier van Bourdeaux.

I C'

O U. X A N T O I.

Port Maran

Rochelle

Plom

Lasson

I. Tyrlantes

La Dive

Tour de Cord

Tour de sourris

Charante flu.

Pertuis Breton

Pertuis Bartinos

Lavardin

Isle Dieu

S. Nicolas

Soubise

S. Maxent

S. Iean d'Angle

Fronte

Rochelle

Isle de Re

Marin

Chasteron

S. Marie

Isle de Loye

Les Portes

Ranjart

Fort

Moers

S. Denis

S. Pierre

S. Andre

Oleron

Marennes

Sales

R. de Seutre

Cleons Boors

Les Baleynes

Porthus

Antioche

Croyse Antiochus

Mammisondt

Roian

Noorder Eylt
Asnes du nord

Zuyder Eylt
Asnes du Sud

Rivier van Bourdeaux

47

Cross
York.

Old
Annap
Rodg

The
Tow

For
fill
back
d'N
m.

Pierre
Perce

The ſecond Demonſtration.

Where in is

Contained the Deſcription of the Iſland of Boelin to the River of Bourdeaux.

FRom the eaſt poynt of the Cardinall to the River of Roche Barnard, the courſe right northeaſt: there lyeth a little Iſland about halfe wayes betwixt the Cardinall and the foreſayd river or rather nearer the Cardinall then the River (for when men are by the River, they can but even ſee the foreſayd little Iſland) men runne with the foreſayd courſe of northeaſt cloſe alongſt to the weſtwards, of that little Iſland, and ſhall fall a little to the northwards of the river, run then within a Cables length alongſt by the ſhoare unto it, untill that the river doe open it ſelfe, and then ſayle in amids the channell, and give the rocks a birth that lie at the eaſter ſhoare. Being come within the rocks, you may anchor there, or elſe ſayle on againſt the ſhoare on the ſtarboard ſide, and ſo may ſave ſhip and goods without anchor or cable, if there ſhould be ſuch need. At low water with and ordinary tyde, there is about eleven, and with a ſpring nine foot water; with an ordinary tyde it floweth there about a fathom, but with ſpring 2 fathom up and downe: the entring of the river lyeth in eaſt & by ſouth. A little to the eaſtwards of the rivers mouth, lyeth a great rock which at high water is covered.

Hee that commeth from the River of Nantes, and is bound to Roche Barnard, & is not well acquainted there betwixt both, let him runne ſo farr to ſeawards of the Cardinall (when hee is to the weſtwards of the Four) untill that hee run about a ſeaboard of that foreſaid little Iſland, (lying halfe wayes betwixt the Cardinal & the River of Roche Barnard) then goeth he ſurely cleare of all the foule ground and other dangers, men may ſayle cloſe alongſt by it to the weſtwards, but to the eaſtwards, of it lye many Rockes and ſhoals.

Hee that will ſayle alongſt to the eaſtwards or to the n. wards of it, muſt leave about 2 third parts of the water to the Iſland, and one third part towards the land, & ſo runne trough betwixt them, but muſt looke out well.

Betwixt the rivers of Roche Bernard and Nantes, lieth Old-downes, Croiſill, or Croſwyck, and Poelgem.

Croſwyck. Croſwyck hath two poynts, within the northweſt poynt lyeth the great village of Croſwyck, which hath a thick tower, & there is a great indraught like a haven, where men may goe to anchor in five, ſix or ſeven fathom: to the weſtwards of it ſtandeth alſo a flat Church upon the high land.

Old-downes. Poelgem The land of Olddownes lyeth a little to the northwards of the Church. Poelgem is a village to the eaſtwards of Croſwyck, with a high ſharpe Tower.

About two leagues from the land ſouthweſt and by ſouth from Croſwyck, and weſt and by ſouth ſoutherly from the e. point of Poelgem, lyeth a great bank, called

The Four. the Four, which at ſome places falleth dry at low water, & lyeth from Bell-Iſle near about eaſt & lyeth the longeſt way ſouthweſt and northeaſt.

For to ſail into the River of Nantes. If you will ſayle from Bell-Iſle to the river of Nantes, then goe away from the eaſt end of the Cardinall, or from the eaſtermoſt rocks that lye of from the Cardinall, directly e. n. e. towards the weſt poynt of Croſwyck, for to ſayle a weather of the foreſayd Four, ſo long untill it begin to ſhoale, and that the ſharp Tower of Poelgem commeth againſt the higheſt of the eaſt poynt of Croſwyck, then you runne alongſt to the northwards of the foreſayd banck, goe then e. ſ. e. or according as the wind is eaſt & by ſouth, & e. ſ. e. unto the Rock with the hole,

Pierre-Perce. called Pierre-perce, but ſo that you come not very neare (at low water) the land ſomwhat to the weſtwards of Poelgem, for it is not cleane alongſt by it. Betwixt the Foure and the point of Croſwyck it is in the fareway 8, 9, and 10 fathom deepe.

From the poynt of Poelgem eaſtwards lye ſome little Iſlands and Rocks, which are very foule, come not very neare them, nor the ſhoare thereabouts. If it ſhould happen that you ſhould turne to windwards, for at low water there falleth many of the rocks dry, (when you come neare the rock with the hole) then run alongſt to the northwards of it, and run in very cloſe by it, leaving it on the ſtarboard ſide of you for to avoyd the foule grounds, which lye off from the poynt of Poelgem towards this rock. Cloſe alongſt by this rock it is foure fathom deepe. Being paſt this Rock with the hole, then runne all alongſt by the north ſhoare, unto S. Nazare in three or S. Nazare. foure fathom at low water, but you muſt take heed of a rocky poynt, ſomewhat to the weſtwards of S. Nazare, the markes there of are theſe: There ſtandeth a mill upon the high land, ſomewhat farre within the land, when that commeth over a countrey-mans houſe, which ſtandeth below by the river, then are you thwart of the rocks, being paſt them, keep yet the north ſhoare, and runne alongſt by it, untill you come within the poynt of S. Nazare, and anchor there in 6 or 7 fathom. In the middeſt of the river betwixt the foreſayd rocks with the hole, and S. Nazare, lyeth a row of Rocks, called Les Porceaux, theſe come at halfe tyde above water: Becauſe of them, & alſo more other ſhoals, lying in the river, you muſt run all alongſt by the north ſhoare, as is before ſayd. Les Porceaux.

Somewhat within S. Nazare upon the north-land ſtandeth a ſharp Tower, when that commeth without the ſouth land, then you cannot take hurt of the foreſayd rocks, run alongſt to the northwards of them, a little to the eaſtwards of them lyeth another ſhoale of Rocks, where men may run about the eaſtwards of it with great ſhippes, it is there very ſhoale water alongſt to the poynt; being within the poynt, men may anchor, as is ſayd, in 6 or 7 fathom. To the eaſtwards of Saint Nazare lye two other villages, and there betwixt the Villages it is very ſhoale, and ſtony ground, there men muſt borrow over the ſouther ſhoare, but when you are halfe wayes to the eaſtermoſt Village then you may well ſayle right on with the poynt of the Village, untill you be paſt it, but againſt that eaſtermoſt Village on the ſ. ſide, upon the poynt, lyeth a banck, called Pynbut, which lieth at leaſt halfe wayes over in the River, but men may run through be- Pynbut. twixt the poynt and this bancke in 5 or 6 fathom, this is the road for ſhippes that are bound out to ſea.

A league further in, in the middeſt of the river lie two ſtony banks in the fareway. At Pelerin is the lading place, Pelerin. 2 leagues from Nantes, where the good are brought off with Lighters from the ſhips, but from S. Nazare to Nantes, or Pelerin, it is Pilotswater, which men do commonly take in, by the above named ſharp Tower, called S. Nazare, where men (when they are within it) may anchor S. Nazare. in 10, or 12 fathom, and ſtay for a Pilot.

For to run into ſea from S. Nazare, alongſt to the ſouth wards of the rock with the hole, you muſt run firſt alongſt by the north ſhoare, as is before ſayd, untill that you come without the ſecond poynt of the River, edge then off from the north land to the middeſt of the River, and ſayle a good wayes about to the ſouthwards of Pierre-perce, when as you can ſee the Rocke (which lieth to the northwards of Pierre-perce) without the poynt, there it is deepe 4 fathom & a halfe, and when as Pierre-

Perce is n. n. west, and north and by west from you, then you come thwart of the Rock, and there you finde deeper water, to wit, 5, 6, and at least 7 fathom, but when you come in the fareway of Pickeliers, then you get 10 or 12 fathom water.

Banks before the Lbire.

Before the River of Nantes lye many bancks, but at half flood men goe over them, the south poynt of the River of Nantes lyeth from the North poynt North-northwest and southsoutheast 4 leagues asunder, to the southwards of it, the land lyeth in with a great indraught, and there men doe run into the Bay. These uneven banks in the River of Nantes, are very unlike, sometimes men sound in 15 fathom,& presently afterwards but 7 or 8 fat.

Armentiers.

But to sayle from Bell-Isle to the bay or Armentiers you must goe e. s. e. untill that you see the Abbey of Armentiers to the eastwards of the trees, which stand within the land over the same Abbey, then goe on e. and by n. so long untill that the Abbey come within the castle of Armentiers, then are you within the Moncks legge. Goe then againe e. s. e. untill that you bee within the rock of Pierremen, you may goe about it on both sides, and when that you can see the Grave open, then you may anchor in 7, or 8 fathom, and row a shoare to fetch a Pilot, it is Pilots water. From Bell-Isle to Armentiers, the course is eastsoutheast about 12 or 13 leagues asunder.

Pierremen.

Pickeliers.

From Armentiers to Use, or Heys, it is south and by east 7 leagues, and from Bell-Isle to Use or Heys, southeast 16 leagues. The Island of Pickeliers lyeth right before the poynt of Armentiers. Betwixt Armentiers or Pickeliers and Use, it is an uneven fareway, with many shoales and banks from 4, 5, 6 and 7 fathom. Upon Use standeth a sharp tower and some little houses or mills, whereby it is very easy to be knowne. It is in the fareway betwixt Use and Bell-Isle 35, and 40 fathom, but when men are within the fareway, it is 25 fathom deepe.

Heys or Use.

Under Use it is not very good riding, the sea commeth alwayes so rowling in, as if the water came through under the Island, at the northend it is shoale water, the road is, when the Church steeples is southwest from you, in 8 or 9 fathom: but men lye there not sheltred but onely for a south west and w. s. w. winde, and it doth ripple there allwayes very much.

From Use to the Killiats, or to the Island of Saint Martens, the courses is eastsoutheast twelve or thirteene leagues. Betwixt both lyeth the Baerges of Olone about halfe a league off from the land of Poictou, and east and by south seven leagues from Use in the right fareway, and in regard that it is nothing but Rocks and stones, therefore it is not good to come neare them in darke weather, men may sayle round about them, and at low water they are uncovered. If you will sayle from Use unto the Killiaets, or unto the tayle of Aise, through within the Barges, then sayle on first east, and being within the Baerges of Olone, sayle to the land of Poictou, which lyeth from Olone to Saint Martens Island eastsoutheast, and from Olone to the Pickelliers northwest.

For to sayl into the Killiats.

From Olone to the Killiaets the coast lyeth most eastsoutheast foure or five leagues. For to sayle into the Killiaets, which is in alongst to the northwards of the Island of S. Marten, in betwixt the foresayd Island and the mayne land of Poictou, you must goe in somewhat northerly then the middle of the channell, or leave two third parts of the channell towards S. Martens Island, and one third part towards the mayne land. Alongst by the Island of S. Martens it is uneven, and somewhat full of banks; come not too neare also the mayne land, for there lye off also some banckes, but you may borrow of them by your lead. Goe in alongst, as before is sayd, untill that the Church of S. Martin be southsouthwest from you, then you shal bee past the banck which lieth north from S. Martens, and lyeth off from the shoare somewhat to the westwards of Saint Martens, there is, a hard steepe stony banke, which shoaleth up suddenly. For to avoyd it when as you must turne too and againe with an easterly, or a northeast winde, you must not bring the little

Marks of the banck before S. Martens.

Tower of Hars in the Village of Loy, but when the little Tower of Hars commeth to the first, or northermost house of Loy, then you must cast about, for then you come against the banck, where remaineth at low water about a fathom depth, and at high water about foure fathom. When the foresayd little Tower of Hars commeth against a mill which standeth at the south end of Loy, then are you winthin the Banke, to wit, betwixt the Bancke and S. Martens. Wen S. Martens commeth to be s. w. and by south, and s.s.w. from you, then you may boldly sayle over the end of the bank towards S. Martens, you shall finde there at low water and spring-tyde at least 3 fathom or sixteen or seventeen foot, also one cast or 2 but 12 foot, then it is all soft grund, as also before S. Martens, but the banks are hard, and with spring-tides there remaineth little water upon them. Before S. Martens you may anchor in 4, 5 or 6 fathom.

For to anchor before S. Martens.

For to anchor before S. Martens, you must anchor so, that you may see open into the haven, and that the point of the Abbey, and the Bosse doe shand the length of two capstane bars one from the other, there is with spring-tides at low water three fathom and a halfe, but at high water six fathom and a halfe deepe.

When you sayle into the Killiats, as before is sayd, it is 12, 11 and 10 fathom deepe, but being come so farre that the Tower of S. Martins beginneth to stand s. w. from you, there it will be by little and little shoaler, and then you may well edge towards the Island in five and foure fathom, it shoaleth then suddenly up, and will be from ten, quickly five, and foure fathom.

If you will goe over the banck that lieth off from the Abbey with a shippe that draweth much water, then you must stay so long that it be halfe flood, for at low water there remaineth no more upon it then three fathom, or a foot or two more: when it is somewhat flowed, then you may well goe over with a great shippe. When the little tower of Hussou commeth to the north end of the Island Urck, or Tivalenes, then are you upon the shoalest of the bank, but when the little Tower commeth over the south end of that little Island, then it beginneth to deepen againe.

The markes for to keepe the deepest water, when you run over the bank are these keep the great Tower of Rochel a handspikes length to the southward of the wood of trees, which standeth upon the northermost high land, and run so over the banck, it is there all soft ground.

If you will anchor before the Abbey within the banke, then run in 6 or 7 fathom and anchor there.

But if you will not anchor under S. Martens, but wil sayle forth towards Burnt Island, then bring that foresayd little tower of Lussou over the little house that standeth upon the little Island Urck, & keep it so standing, & then you can take no hurt of the Laverdyne.

Laverdine.

The Laverdyne is a rane of rocks together a musket shot long, which lieth off from the east point of S. Martens Island, about an English mile, and with spring-tide at low water is uncovered. Betwixt it and the Island of S. Martens men may sayle through, there is depth enough. The markes of the Laverdyne are these: When you come in at the Killiats, and sayle through betwixt S. Martens Island & the Bosse, & you come to see the great Tower of Rochell even without the point of the Bosse, then are you right thwart of the Laverdyne, which lyeth then s.w. from you, it is there betwixt them both not very wide: or else when the foresayd great Tower of Rochell standeth even without the poynt of Bosse, and the North poynt, of the Plom a ships length without the south poynt (which is the north poynt of the Bosse) then are you right upon the Laverdyne, therefore when Rochell commeth a ships length to the southwards of the Bosse (when you come in at the Killiats) then are you past the Laverdyne, and you may boldly goe on s. e. and s.e. and by south towards Burnt-Island.

Porthus.

Porthus is a broad and wide channell, lying in through betwixt S. Martens Island and Oleron, and lyeth from

Use

Uſe ſ.e. & by e. diſtant about 15 leagues. If you will ſayle into Porthus, then run in betwixt both lands e. ſ. e. but much nearer S. Martens Iſland, for to avoyd the banck of Oleron, which is a foule ledge of rocks, at the n. end of Oleron, come no neare it by night then in 12 or 13 fathom.

When you come then by the eaſt end of S. Martens Iſland and are bound to Rochell, or elſe will anchor under the Boſſe bring the great Tower of Rochel a ſhips length without the Boſſe, ſo you can take no hurt of the Laverduyn. You may anchor under the Boſſe in 5 or 6 fathom ſoft ground, ſo that the poynt doe lye north from you. Or elſe if you will anchor under the Abbey of Saint Martens Iſland, then run in upon the foreſayd marks, ſo long untill that the foreſayd Abbey come without the ſ. poynt of the ſame Iſland, ſayle then right with it and then you ſhall leave the Laverduyn far enough on the larboard ſide of you. And being come neare the Abbey, anchor a little to the eaſtwards of it in 5, 6, or 7 fathom, there is the road for ſhips that are bound out.

When you goe into Porthus, and will ſayle to the BurntIſland, then runne in (as before is ſayd) untill you come neare the eaſt end of S. Martens Iſland: thence the courſe is ſouth eaſt, and by eaſt, or from the Boſſe ſouth or ſouth and by eaſt, or with a weſterly wind ſouth and by weſt unto that Iſland.

When you ſayle ſoo neare Burnt-Iſland that the Tower of Voorn, or the Four, commeth over the Burnt Iſland, there you may caſt your ballaſt over board, it is there 12 fathom deepe.

If you muſt turne to and againe with a ſoutherly wind from the Boſſe to the Burnt-Iſland, or from Burnt-Iſland to the Boſſe, then come not to neare the land of Rochell, there lye divers ſtony banckes alongſt the land, a good wayes from the ſhoare, where of you muſt take heed. When Rochell is hidden behinde the ſouth poynt which lyeth over againſt the Creecke, there lyeth a ſtony bancke, upon which remaineth not a fathom of water.

If you will ſayle into the river of Sherrant, then runne about to the ſouthwards of Burnt-Iſland, you may alſo ſayle about to the northwards of it, and ſayle in by the Tower of Voorn, or Four. At low water this river falleth dry, at leaſt 4 leagues within the land. For to ſayle from Burnt-Iſland to Burwage, you muſt ſayle away ſ. ſ. e. & keepe the little Tower of Heers to the weſtwards of the wood, ſo long untill the tower of Voorn or le Four, come over the little red-tyled houſe, that ſtands upon the ſ. ſide of the River of Sherrant, ſayle then in ſ. e. and by little & little ſ. e. and by eaſt untill that Pront (a village that lieth upon the ſtrand) commeth to the n. wards of Soubiſe, when as then Soubiſe cometh within the foreſayd village, and the mill above the village, then you ſhall be againſt the poynt of Oyſterbanck: goe then in alongſt ſ. e. & by ſouth, and bring that outermoſt little Tower of Heers, over the outermoſt ſandy plate, where the gallowes ſtandeth by, keep them ſo ſtanding, and ſayle in ſ. ſ. e. when as then the little Tower of Heers commeth to the eaſt ſide of the valley, which is in the wood, then keepe that ſharpe little Tower right over the eaſt ſide of the valley of the wood, and ſayle in ſo into the Creeke, or river of Burwage. At Burwage was wont not to ſtand a houſe, where now is a ſtrong faire Towne, being builded ſo within 70 or 80 yeares paſt.

The Bannier lyeth alongſt the land of Oleron, and lyeth untill within Burnt-Iſland, at low water it is uncovered, and the tayle of it lyeth farre to the northwards. If you ſhould turn out from the Creek towards the Burnt-Iſland, then bring the Tower of Rochell not without the Burnt-Iſland, before you come thwart of it, becauſe of the Baniard, & then you ſhall take no hurt of it.

At the ſouth end of Oleron, betwixt Oleron and the land to the ſouthwardes of it, is yet another channell, where men may ſayle in and out, called the Mammeſound, deep enough for great ſhips, it lyeth in from out of the ſea eaſt and by n. being come there within, there runneth up a river ſoutheaſt towards Sales, where men doe lade ſalt, being paſt that, to the other poynt of the Mamme-ſound, lyeth a place, where of men runne to the northwards upon theſe marks: you muſt keepe the mill that ſtandeth upon the lands of Oleron over the trees (& ſo you ſhall runne to the northward) off the plate, there is the road for them that will lade ſalt at Oleron or Olderdon. Mammeſound.

But If you will runne in through, and out againe, then you muſt ſayle ſo farre to the eaſtwards, untill that Sales come over the trees, which ſtand within Merven, for to avoyd the tayle or riffe that ſhooteth of from Oleron: when Sales commeth over the trees, ſayle then north and by weſt on, the Burnt-Iſland, but bring Duke Charles Tower to the ſ. wards of the Burnt-Iſland, for not to ſayle within the Banniard. When the little Tower of Heers commeth to the wood, keepe it then ſo ſtanding untill Rochel commeth over the north ſide of the Burnt-Iſland, ſayle then out at the Portruſh. There ſhooteth of alſo a riffe from the weſt-end of Saint Martens Iſland, where of you muſt take heed. Riffe at S. Martens Iſland.

About ſouth, or a little more weſterly, thirteene leagues from the Iſland Uſe, ſouthweſt and by weſt from the Iſland S. Martens, and w. n. w. or ſomewhat more northerly from the River of Bourdeaux, lye the Rockes of Rockedon, or Rochebon, of ſome called Urkamia, in forme of a Trevet or Brandize. The ſouthermoſt of the three is the ſhoaleſt, whereupon remaineth at low water about 2 fathom depth: At the ſoutheaſt ſide the ground is black little ſtones, and at the northeaſt ſide white ſand, but you may not come neare them by your lead ſound by them. Rock of Rochebon.

A little to the weſtwards, not farre from the foreſayd rocks, lyeth yet another rock, where upon is at low water 5 fathom water, nevertheleſſe with a ſtorme the ſea breaketh terribly upon it.

Of the Tydes and Courſes and Streames.

Upon all theſe a foreſayd places, as likewiſe over the whole bending of the French Coaſt, as alſoo before the River of Bordeaux a ſouthweſt & north e. moone maketh the higheſt water.

Of the Depths about theſe places, and in what depths men may ſee the land.

Bell-Iſle men may ſee from below in 55, but under the top in 60 fathom.

Without Uſe it is 35 fathom deep, and then men may ſee the land from below: when it is cleare weather men may ſee it in 60 fathom.

Weſtſouthweſt from Uſe about 9 leagues you ſhall find 45 and 46 fathom, the ground is full of fine ſmall ſtones as greate as courſe ſand and verry ſteepe.

The land of Olone men may ſee it from below in 25 and 30 fathom.

S. Martens Iſland and the north end off Oleron men may ſee in 28 and 30 fathom. When men get ſight off S. Martens Iſland, they ſhall ſee upon it a high Tower, with a high houſe, and upon the ſtrand a mill with foure or five high ſand-hills. Upon Oleron men ſhall ſee a high ſpire Tower upon a red poynt, where men ſhall ſee ſome trees ſtand over it and to the ſouthwards of it, is at 2 or 3 places ragged ſandhills.

How theſe lands doe lye one from the other, and from other lands.

From Bell-Iſle to the river of Bourdeaux, ſoutheaſt ſomewhat ſoutherly	47 leagues.
From Bell-Iſle to S. Sebaſtians, ſ. ſ. e. ſoutherly,	75 laeg.
From Bell-Iſle to S. Andero, ſouth	71 leagues.
From Bell-Iſle to C. de Pinas, or Tores ſ. ſ. w. ſomewhat weſterly	76 leagues.
From Bell-Iſle to Cape de Ortegall, ſ. w.	88 leagues.

From Bell-Iſle to Cape de Finiſterre, ſ. w. 121 leagues.
From the eaſt poynt of the Cardinall to Croſwyck, e. n. e. 7 leagues.
From the poynt of Croſwyck to Pierre-Perce, eaſt ſ. e. 4 leagues.
From the Cardinall to Old-downes, e. n. e. 7 leagues.
From the north poynt of the River of Nantes to the Picqueliers, n. n. e. 7 leagues.
From Pierremen to Armentiers weſtſouthweſt 2 leagues.
From Armentiers or Picqueliers to the Weſt end of Uſe, ſ. and by e. and ſ. ſ. e. at leaſt 7 leagues.
From the eaſt end of Bell-Iſle to Uſe, ſoutheaſt eaſterly 16 leagues.
From Uſe to the Barges of Olone, e. and by ſ. 7 leagues.
From Uſe to the Killiates, or S. Martens Iſland, e. ſ. e. 12 or 13 leagues.
From Uſe to Cape de Pinas, ſouthweſt and by ſouth 75 leagues.
From Uſe to Cape de Ortegall, ſouthweſt and by weſt, 93 leagues.
From Uſe to Portruſh, or the Band of Oleron, the courſe is ſoutheaſt and by eaſt 15 or 16 leagues.
From the Band or Craghe of Oleron to the Tower of Cordan ſ. ſ. e. and ſ. and by e. 14 or 15 leagues.
From S. Martins Iſland to the tower of Cordan, or the river of Bourdeaux, ſ. ſ. e. 16 leagues.
From S. Martens Iſlands to Cape the Pinas, ſouthweſt, ſomewhat weſterly 80 leagues.
From S. Martens Iſland to Ortegall, the courſe is w. ſ. w. ſomewhat ſoutherly 99 leagues.

Heights.

The Iſland Uſe in 46 degrees. 44 min.
The north poynt of Oleron in 46 degrees. 10 min.

How theſe Lands doe ſhew themſelves at Sea.



Heys, being ſoutheaſt & by ſouth from you, that a man may ſee it from the Campagne, ſheweth out of the Maſſe thus.



Heys, being northeaſt from you, ſheweth thus.



Thus ſheweth the Iſland Uſe, or Heys, when you ſayle alongſt by it, being two leagues off from it.



Heys being e. ſ. e. from you, and that a man may ſee the tower from the Campagne, ſheweth thus, & you are then upon 31 fathom depth.

Olone.



Thus ſheweth the Land of Poictou betwixt Heys and the Iſlands of S. Martens, when you ſayle alongſt by it foure leagues a ſeaboard the Land.



This Coaſt lyeth ſouthſoutheaſt.

Thus ſheweth the weſt end of the Iſland of S. Martens.



This belongeth to the former figure from the w. end of S. Martens Iſland, & ſheweth it ſelfe thus, when the ſteeple is e. and by ſouth from you 3 or 4 leagues of, the coaſt lyeth here e. ſ. e. and w. n. w.

La fos de Loys. S. Marten. Abbey. S. John.



When S. Martens Iſland is north and by eaſt from you it ſheweth it ſelfe thus.



When men ſayle out or in at Porthus, S. Martens Iſland ſheweth it ſelfe in this forme.



When the Tower of the Iſland S. Marten is e. ſ. e. 3 leagues from you, then the land ſheweth thus.

S. Martens. S. Maria.



Thus ſheweth the ſouth ſide of S. Martens Iſland, when the Tower or w. end is north, and the e. end n. e. three or foure leagues of from you.



The w. poynt of Oleron, or Olderdon, ſheweth it ſelfe thus, when it is e. from you two great leagues. Thereabouts it is twenty fathom deepe.

Down. Downy land.

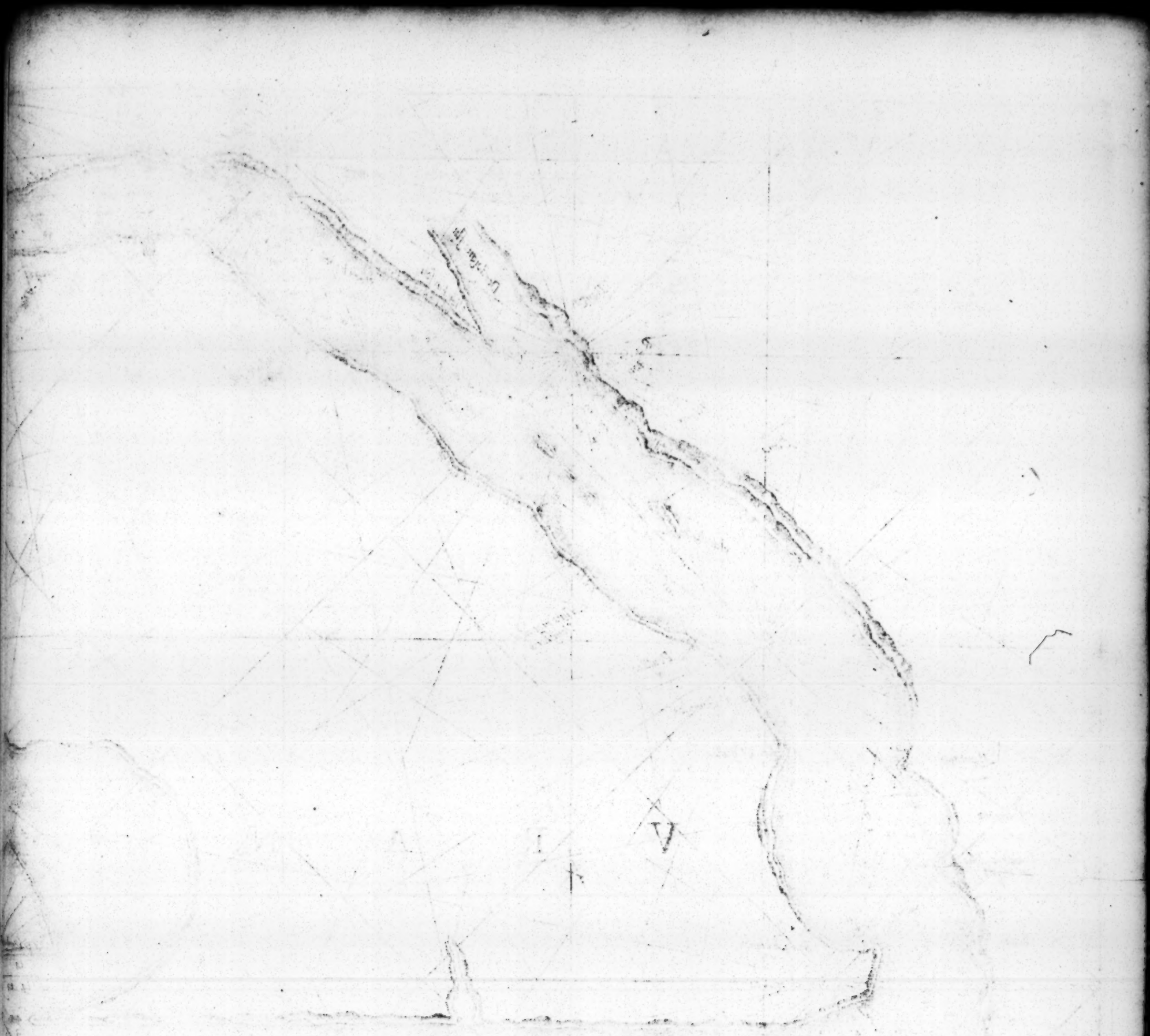


Olderdon or Oleron ſheweth thus, when as you have the trees north by the Tower, which is then ſouth e. from you.



When you are before Porthus, about two or 3 leagues from land, then doth Oleron and Olderdon ariſe in this forme.

The land



Vlieland

Terschelling

Schiermonnikoog

Ameland

Bornrif

Dordogue fle

Vlieshuysen

Steenbanck

Rochs de Bout

Blaye

Conac

Doublet fle Duyvecot

Schiermonnikoogse Gat

Vlieter

Vlieter met d'Vlie Vlieshoeck

Poullac

Castewarnes

Chastillon

Mortaigne

Talemont

Hoeck matte moulens of Mastic

Roisn

Spulack binnen

Spulack op Zee

Hoogs duyn

Mosdyck

Corduan

Noorder Gats

Zuyder Gats

V R A N

Duytsche mylen 15 voor een graadt

Spaansche mylen 17 ¼ voor een graadt

Engel. en Fran. mylen 20 voor een graadt

Caarte Vande Rivier van Bourdeaux tot aen Bayone en voorts aen Conincx rede.

Bourdeaux

C R I I C K

Cabuton

Bayone

S. Ian de Lux

S. Anna

Pinas de S. Anna

Funtarabia

C. Figuier

Passage

S. Sebastiaen

Orio

Conincx reede

B I S C A I A

48

A

B

C

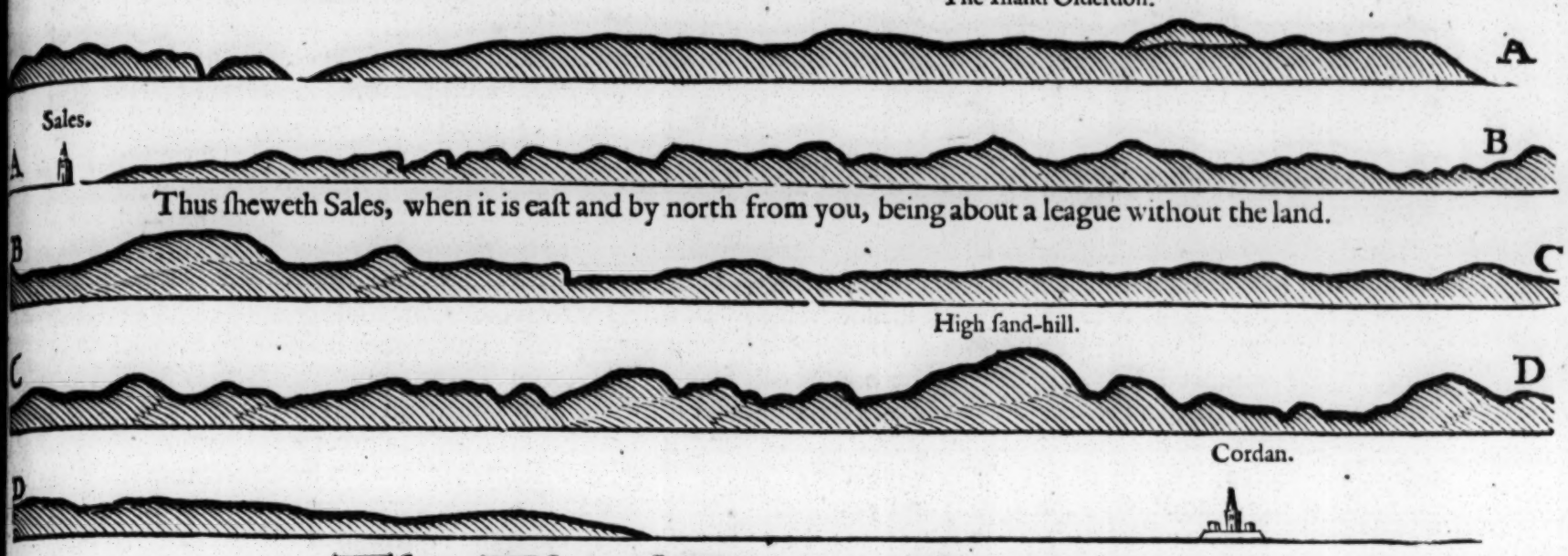
D

Piper.

Norther
& fou-
ther Af-
fa.

Royan.

The land betwixt Olderdon and the River of Bourdeaux ſheweth (when men ſayle alongſt by it) as is pourtrayed in theſe 5 following figures, the letters of one ſort belong one to the other, as AA, BB, CC, DD.



The Third Demonſtration,

Which

Containeth the Deſcription of the River of Bourdeaux to S. Sebaſtiaen or Coninx reede.

FRom the Band or Crage off Oleron to the Tower of Cordan, or the Pole-head, or the mouth off the River off Bourdeaux, called the Garrone, the land lyeth ſouth ſoutheaſt, and ſ. and by e. 13 leagues.

To the northwardes of the mouth of the river of Bourdeaux, lye five or ſix high white Sand-hills, but to the ſouthwards off it, it is ſomewhat low land, blacke little Sandhilles, being growne with ſpiry graſſe.

From the Tower of Cordan off to the northwards, towards the high Sand-hills, which lye upon the north land, lyeth a ſand-bancke, called the Piper, men may ſound alongſt by it on the weſt ſide in ſeven fathom, but upon the north-end it is very ſteepe, and not farre off it is twenty fathom deep.

Piper.

From the north-point off the River runneth off to the ſouthwards, a ſand called the norther Aſſes, and to the ſouthwards of it lyeth another ſand, called the ſouther Aſſes, through betwixt them both, & alſo alongſt to the ſouthwards of them, men ſayle into the River.

Norther & ſouther Aſſes.

If you will ſayle into the River comming from the northwards, then you may run alongſt by the ſhoale in 12 and 13 fathom, untill that the tower of Cordan ſtand ſoutheaſt and by eaſt from you, runne then right in with it, through betwixt the norther and ſouther Aſſes, untill that the high white ſandhil upon the north point of the River ſtand northnortheaſt from you, men may ſo (comming from the northwards) runne in alſo about by the norther Aſſes, by your lead, untill that the Tower come to be ſouthſoutheaſt, and ſoutheaſt and by ſouth from you, then goe towards the Tower, and when the foreſayd high ſand-hil come to be northnortheaſt or northeaſt and by north from you, ſayle then right in with it untill that you have the ſounding of the land, run then in alongſt by it, towards Meſſie, that is the point where all the mils ſtand. When you ſhall ſaile thus towards the high ſand-hill, and that the Tower of Soulack commeth a great fathom to the northwards of the Tower of Cordan, and the little mill of Royan, then are you alſo paſt the Piper, and may run in right eaſt without feare towards Royan, but you muſt reckon well your tyde, for the flood falleth thwart over the Aſſes towards the Tower off Cordan, and the ebbe in the contrary.

Royan.

In this foreſaid channell through betwixt the Aſſes remaineth at low water 3 fathom water upon the ſhoals.

For to ſayl into the River alongſt to the ſouthwards of the Aſſes, comming from the northwards, (that is, the beſt channell) you muſt do thus: Bring the Tower of Soulacke eaſt from you, or ſomewhat more northerly, and ſayle in ſo right with it untill the tower of Cordan be north and by eaſt, and north northeaſt from you, Royan ſhall then ſtand north eaſt from you, or elſe if you come from the ſouthwards, then bring the tower of Cordan north and by eaſt, and north n. e. from you, and ſayle in ſo right with it untill Soulack come to be eaſt from you, Royan ſhall then ſtand n.e. from you, ſayle then right towards it, & comming near it, ſayle to the poynt of Meſſie.

When you are now within the Rivers mouth, and come right againſt the poynt of Meſſie, that is the point where the Mills ſtand upon, then edge over towards the broken Caſtle, called Chaſtillion, ſouth eaſt and by ſouth, that is, eight leagues from Meſſie, and then forth in alongſt by the ſouth land, ſouth eaſt in unto Pouliack, which is two great leagues.

Chaſtillion. Pouliack

In the fareway betwixt the Piper and the poynt with the Mills, or Meſſie, it is 10, 11, and 12 fathom deepe, but out of the fare-way, either on the north ſide, or ſouth ſide, it is ſhoaly, to wit, five, ſix, ſeven, and eight fathom, you muſt runne alongſt cloſe by the point of Meſſie, there is 22 fathom deep.

When as that Royan commeth to the weſt poynt, where upon the mills ſtand keep it ſo ſtanding, and go away ſoutheaſt and by ſouth towards Chaſtillion, it is in this fareway almoſt all alongſt 5 fathom deep, but comming near the north or ſouth ſide, it is ſhoaly, and at the north ſide it is full of ſands, where alſo men may well ſayle through that are acquainted.

From Chaſtillion to Pouliack it is 2 great leagues ſ. eaſt, the courſe is as before is ſayd, and it is there deep 4, 5, 6, and 7 fathom. Over againſt Pouliack in the midſt of the River lieth a little Iſland to the eaſtwards, men muſt runne about it, right in with Bloy, but there men muſt goe over with tyde, for it is there at low water but a little more then one fathom deep.

Pouliack

When you are before Pouliack, and will ſayle to Bloye, then let the water firſt flow an houre, and then you may well goe over with a ſhip that draweth nine or ten foote water. The markes for to ſayle alongſt in the deepeſt water of this reach, are theſe: there ſtandeth a Mill halfe wayes betwixt Bloye and Rocktaw, keepe that without the new wall of Bloye, and then you ſhall run in the deepeſt of the Channell.

Before Bloye it is againe three or foure fathom deepe, runne then alongſt by the north land in three, foure, and five fathom. When you come before the River which lieth up to the eaſtwards called Dordoigne, then ſayle firſt right with the middeſt of the ſecond Iſland, and leave it on

Bloye.

on the ſtarboard ſide, and go indifferent neare alongſt by it, untill that you be over againſt or paſt the Gallowes, which ſtandeth upon the eaſt poynt of the River: and then againe alongſt by the north land unto the foure little houſes. From thence you muſt edge over to the high tower of Dublot or Pigeonhouſe, coming thwart of it, you muſt preſently edge over againſt to the eaſt ſide, to the hight neare Lermond; in that edging over, you ſhall runne through betwixt a ſtone banke on the larboard ſide, and a ſhoale ſand-plate on the ſtarboard ſide, over a banke called the Pace, which is the ſhoalieſt of all the River, there remaineth at low water a little leſſe then a fathom. Being come over the Pace to the eaſt ſide, goe then in alongſt by the eaſt ſhoare, untill you be paſt Lermond, then ſayle againe over to the weſt ſide, right with the houſes of Charterhouſe, and then in all alongſt by the weſt ſhoare, untill you come before the towne of Bourdeaux, in that crooked reach betwixt Lermond & Charterhouſe it is 5, 6, and 7 fathom deep, and before the town 4 and 5 fathom.

The pace.

When men will ſayle out of the river of Bourdeaux, they muſt ſtay at Royan untill they have good weather, and a fore-ebbe to run out with: in running out, keepe the high ſand-hill north north eaſt from you, ſo long untill that the tower of Cordan be ſoutheaſt and by eaſt from you, then you may ſayle out through the Aſſes northweſt and by weſt into ſea.

From Cordan, or the river of Bourdeaux, unto Arcachon, the coaſt lieth ſ. and n. twenty leagues, it is all low ſandy land, betwixt them both lieth a tyde-haven called Anchiſes, men may go in there well at high water with great ſhips.

Arcaſon.

Before the haven of Arcachon, or Arcaſon, lie three ſhoals, men may ſayle into the northwards of them, and alſo into the ſouthwards of them: the norther entry goeth in betwixt the north poynt and the northermoſt ſhoale, but it is narrow and not deep. The ſouther entry lieth to the ſouthwards of all the ſhoals by the ſouther poynt, in betwixt two ſhoaly ſand-bankes, where of the one lieth off from the ſouthermoſt ſhoale, and the other from the ſouth point of maine land, ſ. weſt and by w. in to the ſea. The land to the n. wards of this haven is altogether ſomewhat low ſandy land without trees, but to the ſouthwards of it they are all ſomewhat high ſand-hils without trees alſo, but comming before the havens mouth, you ſhall ſee within in the land many trees. When you come out of the ſea either from the northwards or the ſouthwards, neare about this havens mouth, you ſhall eaſily aſpy the foreſaid bankes on both ſides of the ſouther entry, by the breaking of the ſea, and you may borrow of them by your lead, as neare as you pleaſe, they are very cleane and flat. Upon the ſandhils within the haven mouth, ſtand two great high maſts. If you will ſayle in there, then bring the two Maſts one in the other, & then they ſhall ſtand north-eaſt and by eaſt from you, keepe them one in the other, and ſayle in ſo right with them, and you ſhall ſo ſayle in betwixt the two foreſaid bankes, and at low water you ſhall not finde leſſe then two fathom water, but at high water you ſhall have five and a halfe, and ſixe fathom water, go in ſo upon the markes, untill you come within the ſhoals, and to the end of the ſhoale ſand on the larboard ſide. Being gotten in within it, you muſt luffe up about by it, and goe then on north untill you come to the poynt, which you ſhall ſee on the ſtarboard ſide, but give that a birth, becauſe there runneth off a tayle, there is in that reach no leſſe then ten, eleven, or twelve fathom deep. Being come about that poynt, you may then ſayle in cloſe alongſt by the land on the ſtarbord ſide, which lieth eaſt ſoutheaſt, or you may anchor there in ſixteen, fifteen, twelve, and ten fathom, or further in about the ſecond poynt, in two and three fathom. Over againſt the firſt point, on the north ſide, it falleth very far dry, a great waies within

For to ſail in to the haven of Arcaſon.

Bayone.

From Arcaſon to Bayone, the coaſt lieth ſouth and north ſixteen or ſeventeen leagues. The Rivers mouth of Bayone lieth in betwixt two plaine ſtrands e. ſ. e. and eaſt & by ſouth, and ſometimes more eaſterly or northerly, by reaſon of the ſhiftingh and altering of the ſands before the Rivers mouth. Upon the land on the ſouth ſide of the channell, ſtand two maſts, theſe you muſt keepe one in the other, or the innermoſt a little to the northwards of the outermoſt, and run ſo in over the Barre or ſhoalieſt place, untill you come againſt the ſouth point, and then in alongſt by it. Upon the foreſaid Barre is at high water and Spring-tyde, at leaſt three fathom, with an ordinary tyde two fathom and a halfe, but at low water no more then 3 foot water. When you come about the point, you muſt ſayle up to the ſouthwards, keeping about the middle of the channell alongſt the river, or rather neareſt the weſt ſide, for to avoide ſome foule ground and ſhoale, that lie on the eaſt ſide, and anchor before the town in foure, five, or ſixe fathom. This Bar and this River is Pilots water.

A little within this Barre on the north ſide of the River lieth up to the northwards, a great water within, of 7 leagues long, and falleth out into Sea by Cabritton. Alongſt that great water the ſhips were wont to ſayle up to Bayone, but it is now upon the ſouth end at the river of Bayone, almoſt altogether paled too, ſo that there can but ſmall barkes goe through, for to keepe the better the Barre of Bayone deepe with ſcowring through of the water.

From the Barre of Bayone to S. John de Luz, the courſe is ſouth and by weſt 4 leagues, there is a faire Bay, where men may ride in five, ſixe, ſeven, or eight fathom, according as they will ley farre in, cleane ſandy ground, at the end of the Bay is a little tyde-haven, where upon lyeth the towne on the weſt ſide. At high water, and with an ordinary tyde, there commeth nine foote, but with a ſpring twelve foote water, at low water it falleth altogether dry, ſo that men may goe over there with drie feete. A little within the weſt point of the Bay is alſo a little Dock, where there is a foot water more then in the foreſaid tyde-haven, but it falleth alſo dry at low water.

S. Iohn de Luz

This Bay is very good to know by theſe marks that hereafter are written: It lyeth right in the Bight, to the eaſtwardes of it lyeth the land north and by eaſt towards Bayone, and to the weſtwardes of it the land falleth away ſouthweſt and by weſt, and ſouthweſt towards Fonteravia. Upon the eaſt poynt of the Bay ſtandeth a white Fire-tower, which men may ſee farre off, eſpecially when the Sunne ſhineth upon it, then it ſhineth very white more then the other land. Upon the weſt poynt ſtandeth a flat white houſe a little wayes upon the high land, to the weſtwardes of the Bay it is upon the ſea ſide gray and blewiſh land. Alſoo the high hill of S. John de Luz, is a good marke for to know this Bay, which remainth in ſayling in, lying ſomewhat to the eaſtwardes, or on the larboard ſide. This foreſayd hill of S. John de Luz ſheweth it ſelfe out in height above all other hilles thereabouts, & thereby is very good to be knowne, above upon the top it is ſomewhat flat, as is demonſtrated in the riſing of the lands. Upon this foreſayd hill ſtandeth a Chappell, from whence men may ſee into foure Kingdomes: France, Spaine, Navarre, and Arragon.

About two leagues ſouthweſt and ſouthweſt and by weſt from S. John de Luz, lye the rocks called the Pignons of S. Anna, not farre from land: a league to the weſtwards of them lyeth the Bay of Fonteravia, being a faire Bay.

Pignons of S. Anna.

At the weſt poynt of the Bay lyeth the C. Figure, a high poynt, upon it ſtandeth a caſtle, & to the ſouthwards of it a little chappel. At the poynt of this cape lyeth a rock a little wayes from it, but the ſea cannot runne through betwixt them, except it be with very high floods, it breaketh a little through. At the eaſt ſide of this bay lye two high rocks, and thwart of them lye alſo ſome low rocks a good wayes off from the land. For to avoyd them you muſt ſayle in by the weſt poynt for to come into this Bay, and being within it, you may anchor in eight or nine fathom, but ſo that the foreſayd great rock at the C. Figure ſtand northnorthweſt from you, there you lye in faire ſandy ground, and landlockt for a northweſt winde. The Kroonenbrough lyeth about halfe wayes betwixt S. John de Luz and this foreſayd Bay of Fonteravia.

Kroonenbrough

A little

A little league to the weſtwards of C. de Figuer, lieth Paſſage alſo a faire haven. At the weſt ſide of the havens mouth, which is very narrow, lyeth a round rock, ſo that it is evill to come in there with an ebb, but with a flood it is better, without it is very cleane, without any ſhoale or fowle grounds, but onely the foreſayd rounde rocke. The towne lyeth a little within the haven on the w. ſide, where men doe lye before it in 7 fathom.

Paſſage.

Two great leagues to the weſtwardes of Paſſage, lyeth S. Sebaſtians, betwixt both is alſo a ſand-bay in a bight, where there goeth up into the land a ſhoale little river. where come in many Barkes.

The haven of Saint Sebaſtians is good for to come into, men doe runne in there betwixt two little caſtles, where of the eaſtermoſt is the greateſt, ſtanding upon a high hill. The weſtermoſt is a little ſquare Tower, and lyeth upon a little Iſland or rock. In the havens mouth being narrow, betwixt the two foreſayd little Caſtles, lyeth a rocke, which at low water is ſixe fathom deepe, and when it is a ſtorme out of the ſea, it breaketh allwayes upon it, and lyeth neereſt the eaſt-land, by the weſt-land it is deepe ten fathom. Now for to avoyd the foreſayd rocke in comming in, there commeth an Abbey to the eaſtwards of the weſtermoſt Iſland, and a little Tower. If you keepe them one in the other, then you run into eaſtwards of it.

S. Sebaſtians.

For to anchor without S. Sebaſtians in the road, you muſt keepe the high hill which lyeth upon the point of Cape Figuer, without the foreſayd eaſtermoſt caſtle, there you may anchor, but if the ſame come to be hidden behind the caſtle or Iſland, then you may not anchor in the road of S. Sebaſtians. When you are come through the narrow within the rock and the caſtles, then you may anchor at the eaſt ſide under the great caſtle, there is the beſt road. Within the foreſayd caſtle goeth up a little water, men may goe at low water on foot from the eaſter caſtle alongſt a high ſtrand upon the maine land, unto the Towne, which lyeth behinde the foreſayd high hill with the Caſtle, yet the ſtrand at high water is covered; it is a bay, and within before the towne it is deepe five, ſixe, and ſeven fathom, at the weſt ſide under the little Iſland, men may not anchor, becauſe it is flat and ſhoale there.

He that will goe forth from thence into S. Sebaſtians, let him run in, keeping the middle channel, betwixt the two Iſlands, and let him leave the little Iſland where upon the chappel ſtandeth on the ſtarboard ſide, running in ſo right againſt the firſt or the ſecond wall of the towne, and anchor there, the boats or ſhallops ſhal come aboard of him, and helpe him into the haven betwixt the walles.

A league to the weſtwardes of S. Sebaſtians, lyeth a ſandbay, where men may anchor ſo deep and ſo ſhallow as they will.

Of the Tydes and Courſes and Streames.

Like as on all the coaſtes of France, ſo alſo at the mouth of the River of Bourdeaux, maketh high water a ſ. w. and northeaſt moone.

In the Haven of Arcaſon a ſouthweſt and by weſt & a northeaſt & by eaſt Moone maketh high water, but the flood drawes almoſt an houre longer in then the water flowes.

On all the places, and before all the havens of theſe coaſts, a ſouthweſt and northeaſt moon maketh the higheſt water; but within the havens about a poynt later, according as they lye deepe within the land, like as on the coaſts off Brittaigne, Poictou, and Gaſcoigny. Men reckon here alſo no falling or ſetting of the ſtreames. But the ſtreames fall here thwart off and on.

Upon the coaſt of Biſcay wee find no running of ſtreames, but a ſoutheaſt & northweſt moone maketh over all the coaſts the higheſt water, and within the Rivers a point leſſe.

Of the Depths.

The land againſt the River off Bourdeaux men may ſee from the poop in 30 fathom, and the Tower off Cordan in 27 fathom.

Betwixt Arcaſon, & S. John de Luz men may ſee the land in 30 fathom, when about Bayone, they ſhall ſee Cabritton, Bayone, Bedert, and S. John de Luz, almoſt all flat Towers.

Being before Paſſage, men may ſee alſo the point C. Figuer, and S. Sebaſtians, the land lieth in there with a great Bay.

About C. de Figuer lieth a high hill, which at the ſouthweſt ende is very ſteepe, and goeth very long ſloping down towards the north.

When men are before S. Sebaſtians 7 or 8 leagues without the land, then it riſeth ſomewhat long, and at the weſt end ſteep and hollow, but when men come cloſe by the land, then it is very high and ſteepe.

When men are 8 leagues without S. Sebaſtians, then may they ſee the eaſtermoſt or greateſt caſtle upon the high hill, and alſoo the little Iſland to the weſtwards of it.

Courſes and Diſtances.

From Cordan to Arcaſon ſouth	20 leagues.
From Arcaſon to Bayone ſouth	16 or 17 leagues.
From the Tower Cordan to Cape de Pinas w. ſ. w. ſomewhat ſoutherly	75 leagues.
From Bayone to S. John de Luz ſ. & by w.	4 leagues.
From S. John de Luz to the Pignons of S. Anna, ſ. w. and by weſt	2 leagues.
From S. John de Luz to S. Sebaſtians w.	8 leagues.
From S. Sebaſtians to Gateria	8 leagues.
From Bayone to the Seames n. w. ſomewhat weſterly	102 leagues.
From S. Sebaſtians to Bell-Iſle n. n. w. ſomewhat northerly,	75 leagues.
From S. Sebaſtians to the Seames northweſt and by north	102 leagues.

The courſes & diſtances of the places one from the other is declared in the deſcription.

Heights.

The Tower of Cordan lyeth in	45 degrees, 36 minut.
Arcaſon in	44 degrees, 40 minut.
Bayone lyeth in	43 degrees, 46 minut.

How theſe Lands doe ſhew themſelves at Sea.



Thus ſheweth the land about Arcaſon when it is from you eaſtſoutheaſt neare two miles.



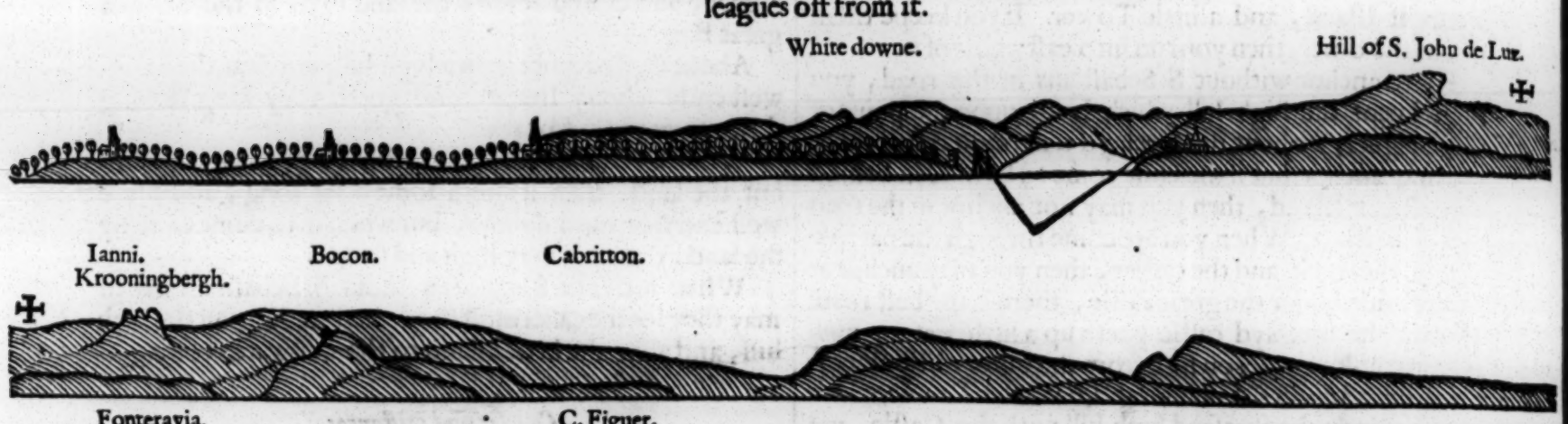
Thus appeareth Arcaſon when it is northeaſt and by eaſt about two miles.



Thus ſheweth the land about the bight of S. John de Luz, off from Cabritton untill paſt S. Sebaſtiaens.



Thus ſheweth S. Sebaſtiaens, when you get firſt ſight of it, being ſeven leagues off from it.



The foreſayd Iſland about the bight of S. John de Luz from the northwards of Cabritton untill paſt Fonteravia, ſheweth thus, as is demonſtrated in theſe two figures, when you are before the Barre of Bayone.



When the Hill of S. John de Luz is ſouth from you five leagues, then the land to the eaſtwards of it untill paſt S. Sebaſtiaens, ſheweth as is here above pourtrayed in theſe two figures, the BB, and CC, belong one to the other.



Thus ſheweth the land about S. Sebaſtiaen when it is five leagues from you.



Paſſage and S. Sebaſtiaens, being ſouthſouthweſt from you, ſheweth thus.

The



Duytsche mylen 15 in een graat
Spaansche mylen 17½ in een graat
Engel. en Fr. mylen 20 in een graat

B I S

Bilbao
Castro
Portogalette
Barse
M. Madin
Laredo
Orungin
Placentia
Orio
Comax Reede
Galeryde
Comax haven
Deva
Bari
C. de Machicaco

Duytsche mylen 15 in een graat.
Spaansche mylen 17½ in een graat.
Engel. en Fra. mylen 20 in een graat.
Lieues d'Allemaigne 15 en un degre
Lieues d'Espaigne 17½ en un degre
Lieues Angl. en Fra. 20 en un degre

B I

Kust van Biscayen tusschen Rio de Sella en t' Eylant van S. Cyprian.

Rio de sella
Villa Chriola
Sanson
Gyon
Toreo
C. de Finas

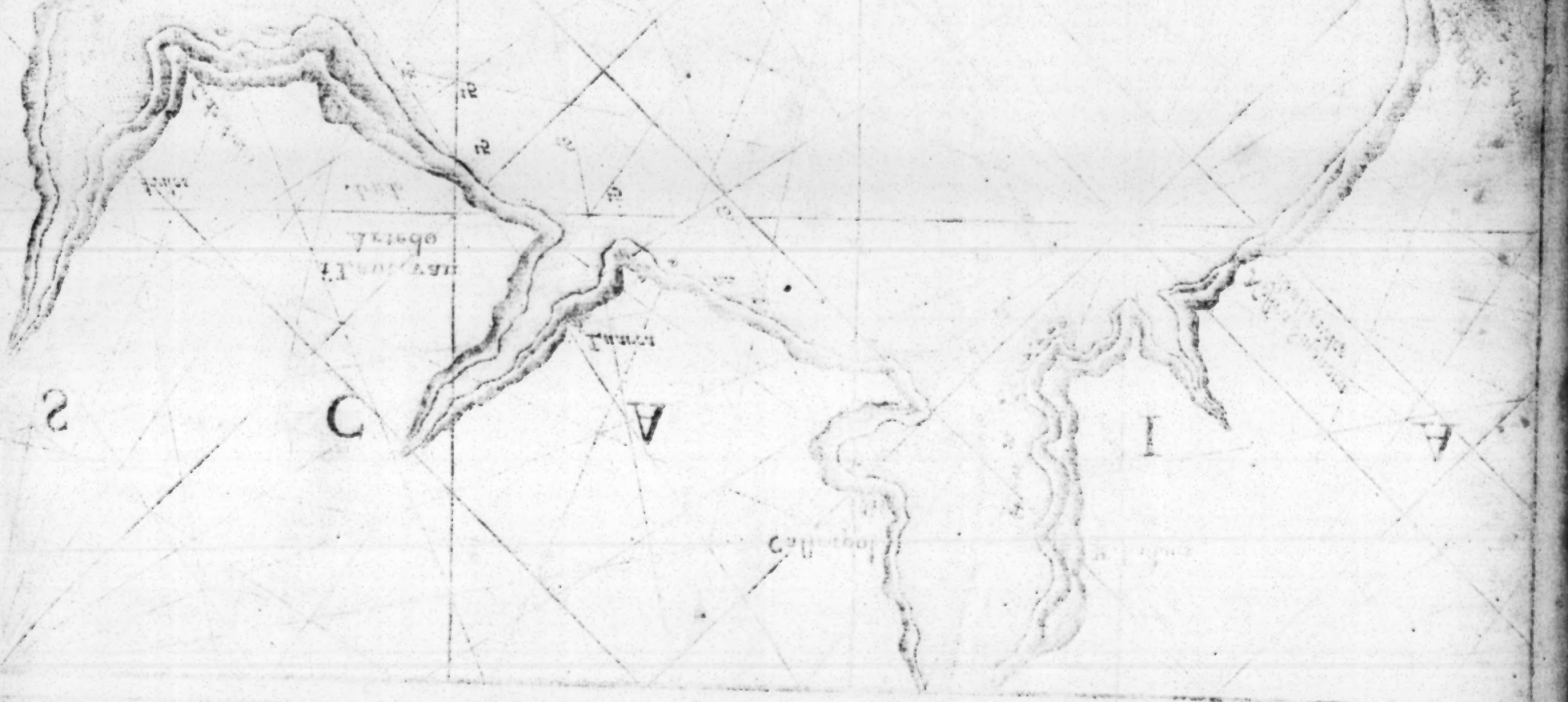
C A I A.

Kust
Van Biscayen tus:
schen Orio ende rio
de Sella.

C. Figo
S. Andero
Laleta
Espinosa
S. Iusta
S. Martin
Soterviles
S. Maria
S. Vincente
Lianes
Rio de sella

S C A

Castrapol
Ribadeus
Luarca
t Lant van
Artedo
Artedo
Aviles
C. de Aviles
Nostra Signora
de los reles
C. de Brito
B. S. Cyprian
I. S. Cyprian
de Finas



The fourth Demonſtration,

In which

The Coaſt of Biſcaye from Coninx reede to the Iſland S. Cypriaen, are delineated.

FRom S. Sebaſtians to C. de Martinchaco, the courſe is w. n. w. 13 leagues. Betwixt them both lye the roades Gateria and Deva.

Gateria. Gateria lyeth from S. Sebaſtians weſt and by north, and w. n. w. diſtant 7 leagues, being a faire round ſand-bay, where is good riding for weſterly winds, men lye there within the weſt poynt right before the Towne in faire ſandy ground, a north winde commeth right from the poynt. This bay is commonly called Kings-haven.

Alongſt the coaſt of Biſcay, betwixt S. John de Luz and Gateria is every where clean ground and good anchoring in 20 fathom.

From Gateria to Deva it is a league and halfe to the weſtwardes: which is an off-water that commeth out of the high-land.

Two leagues to the weſtwardes lyeth the poynt of Cape Martinchaco.

About thirteene leagues weſtnorthweſt from S. Sebaſtians, lyeth the Cape de Martinchaco, a little to the weſtwardes of it is a good tyde-haven, where in lyeth a little Towne about a league within the land, upon a river which commeth out of the high land. A little to the weſtwards of Cape de Martinchacol, lyeth a great rock faſt to the land, and a little to the weſtwardes of the ſame another: upon the poynt called Punte de Avillanes. Southweſt and by weſt from Martinchaco lyeth the haven of Bar-
Barmea. mea, a faire great Bay, the eaſter poynt is foule, therefore men muſt give it a good birth, and run in alongſt by the weſt ſide, when they are gotten in it is large enough, there they may anchor where they will.

Placentia. To the weſtwardes of Barmea, lyeth alſo Placentia upon a little River, the towne lyeth a little within the land. There are all tyde-havens.

From Cape de Martinchaco to Bilbao, (where betwixt lye the foreſaid havens of Barmea and Placentia) it is ſ. ſouthweſt & ſouthweſt & by ſouth 6 leagues.

From Placentia to Bilboa it is two leagues weſtſouthweſt and weſt and by ſouth. Bilbao lyeth upon a great River alongſt which there commeth of much Iron, it is a good haven, but it lyeth not farre in, by reaſon of the Barre which lyeth thwart over the haven, where men muſt goe in with high water.

Bilbao. At the eaſt poynt of Bilbao ſhooteth of a riffe, which men muſt avoyd, there lye alſo ſome rockes under water. It is a high ſteepe point, and is white to ſee to.

Within the riffe that runneth off from the poynt, men may anchor in ſeven and eight fathom, betwixt the poynt and the Piere on the eaſt ſide, there the Pilots come off which bring up the ſhippes, and there men lye land-lockt for a northweſt winde. From this foreſayd poynt or road to the Barre or river mouth of Bilbao, it is a league and halfe ſ. & by weſt, which lyeth in by the weſt land, there ſtand five or ſixe houſes upon the w. land, when the two weſtermoſt houſes come one in the other, or when you may ſee through the two eaſtermoſt houſes, which ſtand within in the land, then are you upon the Bar or ſhoale, then goe in ſouth and ſ. by eaſt right with the Caſtle Portugalletto, and alongſt cloſe by the Caſtle, and anchor a little within the Caſtle for a weſt winde. But when you are before the Barre, the Pilots come off and bring you to the Town.

Caſtro. When you lie without in the Bay, then you may ſee Mount Anthony lie w. and by north from you.

From the poynt of Bilboa to Caſtro, the courſe is w. 5 leagues, that is a good haven for 6, 7 and 8 fathom depth. The narrow of the haven lieth in ſouth, in 10 fathom. But further in the river towards the towne, it is not deeper then 3 or 4 fathom.

From Bilbao to the hill of S. Anthonies, it is w. and by M. S. An-
north nine or ten leagues. From Caſtro to Laredo, the thony.
courſe is weſt diſtant five leagues, upon the weſt ſide lyeth the foreſayd hill of S. Anthonies, which is a high hill, men may ſayle in cloſe alongſt by it untill they come about the eaſt poynt; within it is wide and broad, and a fit haven for great ſhippes, there men may anchor in ſeven or eight fathom. To the eaſtwards over againſt the hill of S. Anthonies, in the middeſt of the ſound, lyeth a rane of Suncken
rockes under water, where men may ſayle in about it on Rocks.
both ſides, men may eaſily eſpy them, becauſe it doth alwaies breake upon them, within them is the road for ordinary ſhips, a little before the haven, which is built with a wall. But the great ſhippes, lye a little further off in 6 or 7 fathom depth. On the ſouth ſide of the haven is a little tyde-haven, from the ſame there commeth a great riffe ſhooting off from the eaſt ſide, towards the hill of S. Anthonies; within it is two fathom water right before the village, from de village commeth a tayle of ſand, lying thwart out, with in it at low water it is a fathom deepe. In the middeſt of the ſound it is nine fathom, & at the poynt of Saint Anthonies 20 fathom deep.

From S. Anthonies hill to Cape de Keſgo it is weſt and C. Keſ-
w. and by ſ. 2 leagues, that is a great Cape lying to the go.
eaſtwards of S. Andero: thwart of it is clean ground.

From Cape de Keſgo to the weſt poynt of S. Andero, it is w. & by ſ. 5 leagues, a little to the ſ. wards of the point of S. Andero, upon the e. poynt of Sardinis, is a ſand-bay, S. An-
there is good anchoring in ten fathom. dero.

From C. de Keſgo to the haven of S. Andero, the courſe is w. ſ. w. diſtant 2 great leagues. S. Andero lieth within a Bay, there lyeth an Iſland before the haven, men may go about it on both ſides, it is deepe 8 & 9 fat. but to the ſ. wards of the Iſland it is deep 5, 6, & 7 fathom, according as men will come near to the ſtrand, the haven lieth in firſt w. n. w. The Iſland lieth a great league within the bay: from the eaſt point of the haven, unto the weſt point of the land, it is ſouth and north about a great league. S. Anthonis and the weſt point of S. Andero, lie one from the other e. and w. about 5 leagues. Laredo.

For to know the land when you fall with the land about Laredo, you muſt know that on the w. ſide of the haven of Laredo, lyeth the hill of S. Anthonis, which is a very high hill, which men may ſee very farre from the e. and the w. & a little above the towne of Laredo, men may ſee alſoo a ſharpe hill like the poynt of a Diamond, or the point of a two hand ſword, further it is about Laredo very high double land, two, three, and at ſome places foure double. The hill of S. Anthonies doth ariſe in two high hommockes, with a valley or ſaddle in the middeſt, betwixt them both within in the land lye alſo two high hills with ſharpe topps. Above and to the w. wards of S. Anthonies, lyeth a piece of land judged to bee about two leagues long, which lyeth in five hills, the eaſtermoſt is the loweſt, and riſe all higher and higher towards the weſt, ſo that at the laſt to the weſtermoſt is the higheſt, which goeth off ſomewhat flat downward towards the weſt. Be- Bay of
twixt that eaſtermoſt hill and S. Anthonies, lyeth a bay Port.
about a league long, called the Bay of Port, men cannot ſee theſe foreſayd hills when they are cloſe by the land, but they muſt be a good wayes off to ſeawardes.

To the weſtwardes of theſe foreſayd hills lyeth an other piece of land, which at the eaſt end is higheſt, and goeth

ſloping off towardes the weſt end, allmoſt like Portland. Betwixt that poynt and the five foreſayd hills, lyeth an other ſand-Bay, whereabouts ſtand ſome little houſes, but by it lye many rockes & fowle ground. Thereabouts within the land lyeth the foreſayd high round ſharpe hill in forme like the poynt of a ſword.

S. Andero hath but few hills that are eaſy to be knowne, but when men are before the haven, then they ſhall ſee to the eaſtwards of the towne, a Caſtro upon a high hill, in forme like a Sugerloafe, or a hay-cock, and to the eaſtwards of it is much double land of two and three heights double. But when men come about the Cape de Keſgo, then they ſhall ſee preſently the caſtle upon the weſt land.

From S. Andero to Cape de Pinas, the courſe is w. or a little more northerly 31 or 32 leagues. Betwixt them both lye theſe havens following.

S. Martin. Settevills
First the haven of S. Martin, or Settevilles, a tyde-haven lying eaſt and weſt 4 leagues from S. Andero.

S. Vincent.
From thence to S. Vincent alſoo a tyde-haven is five leagues diſtant: the haven goeth in on the eaſt ſide; from the weſt ſide commeth ſhooting off a little riffe, and in the midſt of the havens mouth lyeth a little Iſland, where men may goe in on both ſides.

Lhanes.
From S. Vincent to Lhances, a tyde-haven, the courſe is weſt 2 or 3 leagues. Upon the weſt ſide of the haven ſtandeth a little Church: and a little within the haven, lyeth a middle plate or ſand, men muſt go in on the w. ſide of the ſand: theſe are all narrow havens, & but little knowne.

From Lhanes to Rio de Sella, the courſe is w. 5 or 6 leagues: betwixt them both lye alongſt the coaſt many rocks, & within them many ſand-bayes, where men for need might ſave ſhips.

Rio de Sella
Hee that will goe into Rio de Sella muſt look out for a maſt which ſtands upon the eaſt land cloſe by the ſame men muſt goe in, the weſt ſide is within fowle, within the maſt men muſt anchor before the village: this is alſo a tyde-haven.

Villa Vicioſa.
From Rio de Sella to Villa Vicioſa it is weſt, 9 leagues, this is alſo a tyde-haven, but is clean, the havens mouth lyeth in ſ. ſ. e. and ſ. e. and by ſ. cloſe alongſt by the weſt poynt of the land, the eaſt ſide is fowle unto the middeſt of the haven: there lyeth a rock with a plate right in the midſt of the haven, which at low water fall dry: ſo ſoon as men are within that rock, they muſt anchor within the rock; upon the weſt ſide lyeth the towne, men may alſoo ſayle up to it, & anchor there in the ſhoale water.

Sanſon.
Six leagues to the weſtwards of Villa Vicioſa lyeth the out-poynt of Sanſon, to the eaſtwards of it lyeth a little Iſland, where upon ſtandeth a little Tower. Betwixt Sanſon and the foreſayd little Iſland is a good road in ſix or ſeven fathom.

At the weſt ſide of Sanſon is alſoo a good road right before the little haven of Sanſon in 6 or 7 fathom.

Gion.
To the weſtwardes of Sanſon lyeth Gion with a Piere or Head that is paled off, under the which the Fiſhermen which dwell there, lay their barkes.

A great league to the weſtwards of Gion lyeth the Bay of Tores, a good road for a ſouthweſt and weſt wind in 8 and 9 fathom. Upon the poynt ſtandeth a high tower.

Tores.
Three leagues to the weſtwards of Tores lyeth Cape de Pinas, where many rockes lye off to ſeawards, at leaſt a halfe league of, ſome doe ſay that men may ſayle through betwixt the poynt & theſe rockes.

C. de Pinas.
From the cape de Pinas lyeth off a rane of rockes, lying at the leaſt a halfe league into ſea, ſome ſay that men may ſayle through betwixt the point and theſe rockes. But a little within or to the weſtwards off the Cape de Pinas, lyeth a great rock, betwixt that rocke and the land men may ſayle through.

When men are within the Cape de Pinas, then lyeth Avilles three leagues from thence ſouthſouthweſt which is a good tyde-haven, where a great ſhippe may well goe in at halfe flood, alſoo there is a good road before this haven in 6 and 7 fathom.

For to ſayle in there, men muſt goe in by the e. land, the weſt-land is farre off ſhoale, there ſtandeth a little Chappell upon the eaſt-land, men muſt ſayle in cloſe by it, and anchor a little wayes within two rockes that lye on the eaſt ſide, a little within the havens mouth. The towne lyeth a league further up. From the weſt poynt runneth off a riffe, and lyeth inwards alongſt the haven, towardes the town, ſo that it is there very ſhoale on both ſides. On the weſt ſide without the haven in the bight, lye 2 great rockes right before the little Church in the Sand-bay, men ſayle round about them, but it is not very cleane: but without the rocks good anchor ground in 7 or 8 fathom, over againſt the little Church that ſtandeth againſt the high land.

Avilles. Luarca.
From Avilles to Luarca is 6 leagues and from Luarca to Ribadeus w. ſ. w. 6 leagues, & from Aviles to Ribadeus ſ. w. and by w. 12 leagues.

Ribadeus.
From the eaſt poynt off the havens mouth of Ribadeus, lyeth off a ledge or riffe off rocks towards the w. ſhoare, you may ſound in about it in foure fathom, or foure fathom and a halfe: or elſe if you keepe the little towne Caſtropoll even without the poynt, ſo ſayle right in with it, then you ſhall not come too neere the foreſayd ledge, but you ſhall ſayle far enough alongſt to the weſtwards off it. The w. poynt ſheweth it ſelfe when you come in out of the ſea, like an Iſland; upon it at the north end ſtandeth a flat tower, allmoſt like the tower in the Groyne, but not ſo great. About thwart off that Tower leyth a ſuncken rocke a little wayes from the land, you muſt look out for it, and take heed off it, when there commeth in any great ſea, you can eaſily eſpye it by the breaking of the ſea upon it, but not with ſmooth water: at the very loweſt water it commeth even with the water. The w. ſhoare is fowle and rocky: there runneth off to the ſouthwards of the foreſayd Tower alſo a fowle ledge or riffe off rockes, at leaſt halfe wayes over the havens mouth, and at the ſide of it you cannot uſe the lead. When you are paſt the ledge or riffe that lyeth off from the eaſt ſhoare, you muſt run in about it, and edge in ſomewhat to the e. ſhoare, and ſayle in alongſt by it untill that you are paſt, or come to the end of the foreſayd ledge or riffe off rockes, which lyeth off from the weſt ſhoare, as ſoone as you ſhall bee paſt it, you muſt luffe up about it towards the weſt ſhoare, for to give the e. ſhoare (within the havens mouth) a birth, which is a great wayes within very flat or ſhoale, but on the w. ſide it is deep water. There ſtandeth a little Tower on the w. ſhoare a little within the point, where the riffe lyeth off, which you ſhall ſee when you are come within the weſt poynt, and run alongſt by the riffe, when you get that little tower w. or thwart of you, then are you at the end of the riffe, then you muſt ſayle towards that little Tower, untill that you come to the w. ſhoare, and run in alongſt by it, untill you come before the Towne, there you muſt lye with an anchor to ſeawards, and with a cable faſt on the rockes.

A little league to the w. wardes of Ribadeus lyeth a tyde-haven, he that commeth from the w. alongſt by the ſhoare thwart of it, ſhould lightly thinke that to bee the haven of Ribadeus, but it is light to diſcerne from it by theſe markes following. On both ſides of this tyde-haven are the coaſts all high land, but on both ſides of the havens mouth of Ribadeus, it is low land. Alſo there lyeth a high ſharpe hill & very eaſy to be knowne, which ariſeth out above all other hills thereabouts, which may bee knowne at leaſt 7 or 8 leagues off, upon it lye ſome heapes of ſtones appearing like little houſes when that you have that hill ſ. ſ. w. from you, ſayle in ſo right with it, then you ſhall bee with the land right before the havens mouth of Ribadeus.

Northweſt from Ribadeus about 8 leagues, lyeth the Cabo de Brilo, a little to the weſtwards of it lyeth the little towne Viverus. To the weſtwardes off the Bay off Cypriaen (where men may anchor in ten fathom) lye two great high rockes: w. north w. from theſe rockes about a halfe league lyeth the Iſland S. Cyprian, right before the haven

Viverus.

haven of Viverus, whereby this haven is eaſy to be knowne, you may ſayle about on both ſides off this Iſland into the haven off Viverus, in all alongſt in the middle of the channell ſouth and ſouth and by w. untill you come before the town, being within, you may anchor where you will either on the e. or w. ſide, it is there ſhoale water of 5, 6, 7, & 8 fathom, according as you run farre in.

Of the Tydes and Courſes and Streames.

Upon the Coaſts of Biſcay wee find no runnings of ſtreames, but a ſouth e. and north w. moone maketh upon the whole coaſt the higheſt water, but within the Rivers a poynt later.

Courſes and Diſtances.

From Saint Sebaſtiaen to Gateria weſt and by north 7 leagues.
From Gateria to C. Martinchaco weſt and by north 5 leag.
From C. Martinchaco to Caſtro w. ſ. w. 9 leagues.
From C. Martinchaco to M. S. Antony, weſt and by ſouth 13 leagues.
From M. S. Antony to S. Andero or Lalata weſt and by ſouth 4 and a halfe leagues.
From S. Andero to Rio de Sella weſt ſomewhat ſouherly 16 leagues.
From Rio de Sella to C. de Pinas w. & by n. 21 leagues.
From C. de Pinas to Avilles ſouthſouth w. 3 leagues.
From Luarca to Ribadeus w. ſ. w. 5 leagues.
From Ribadeus to C. de Brilo n. w. 8 leagues.
From C. de Brilo to Iſle de S. Cipriaen n. w. 3 leagues.
From C. de Pinas to Ribadeus ſouth weſt and by weſt 13 leagues.
From Cape Martinchaco to Arcaſon north e. eaſterly, 28 leagues.
Crom C. Martinchaco to Uſe, n. eaſterly 60 leagues.
From S. Andreo to the Seames n. n. w. 92 leagues.
From Cape de Pinas to the Tower of Cordan e. n. e. & north e. and by e. 75 leagues.
From Cape de Pinas to Porthus or S. Martins Iſland, the courſe is n. e. eaſterly 80 leagues.
From Cape de Pinas to Bell-Iſle, the courſe is north n. e. 80 leagues.
From Cape de Pinas to the Seames n. 81 leagues.
From Cape Pinas to Cabo de Veilli in Ireland north and by w. weſterly 170 leagues.
From Cape de Pinas to Ortegall w. & by north weſterly 29 leagues.

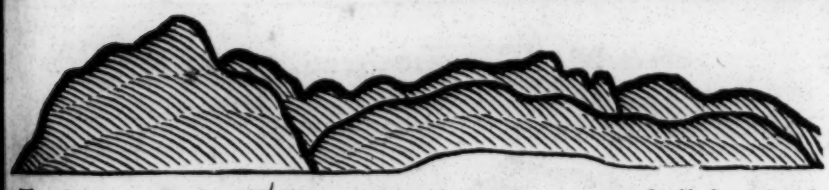
Heights.

Bayone lieth in 43 degrees, 46 min.
The Cape Martinchaco lieth in 42 degr. 46 or 48 min.
The C. de Pinas lieth in 43 degrees, 52 or 53 min.
The whole coaſt of Biskaye betwixt Cape de Pinas and Martinchaco, lyeth in about 43 degrees, and 43, 44, or 45 minutes.

How theſe Lands doe ſhew themſelves at Sea.



Thus ſheweth the C. Martinchaco and the land to the e. warſts of it.



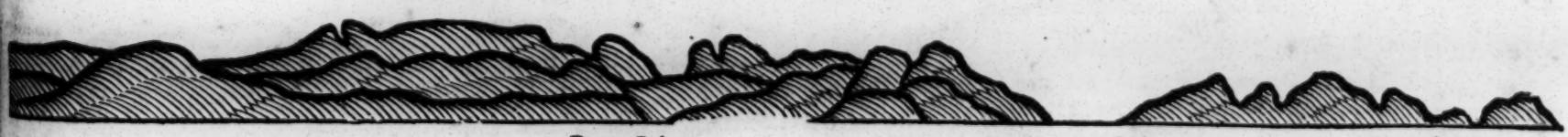
To the w. wards of Bilbao towards Caſtro, men ſhall ſee a high ſharpe hill and ſheweth thus towards Caſtro.



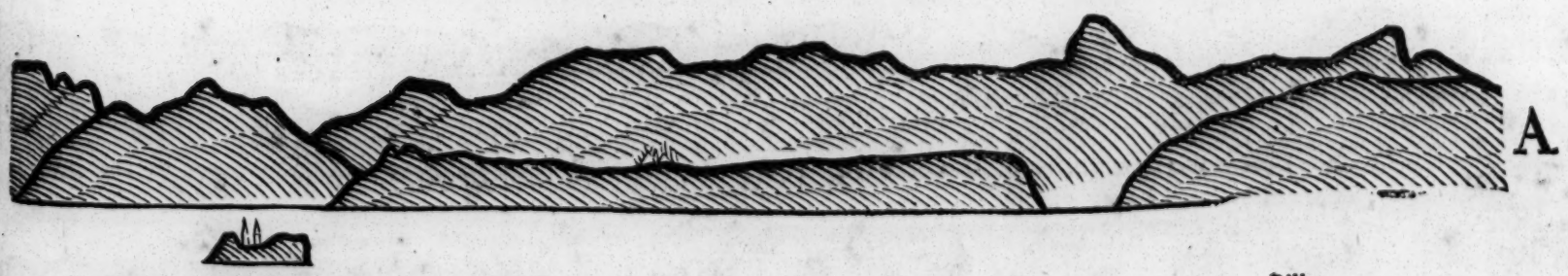
Thus ſheweth the land to the e. wards of Bilbao, when men fall there with the land.



Thus ſheweth the land betwixt the Cape Martinchaco and Bilbao.



Thus ſheweth Bilbao and the land to the w. wards of it, when you are thwart of it.



When the ſharpe hill over againſt the haven of Bilbao is ſouth and by w. from you, then the land ſheweth as in this and the following figure may be ſeene, the AA belong one to the other.



Caſtro.



Laredo.



Thus ſheweth the hill of S. Antonio lying at the w. ſide of Laredo.



The hill of S. Antonio ſheweth thus, when it lyeth ſ. ſ. e. from you.



The land to the eaſtwards of Laredo, being ſouth from you, ſheweth thus with a ſharpe hill.

S. Antony.



Sand-bay.



Cape Keſgo.

The land betwixt the weſt poynt of Bilbao, and C. Keſgo to the weſtwards of Mount S. Antonio, ſheweth at ſea when you ſayle alongſt by it, as is pourtrayed in theſe two figures here above.



Thus ſheweth the land of Biskaye betwixt Laredo and Rio de Sella, when you ſayle alongſt by it.

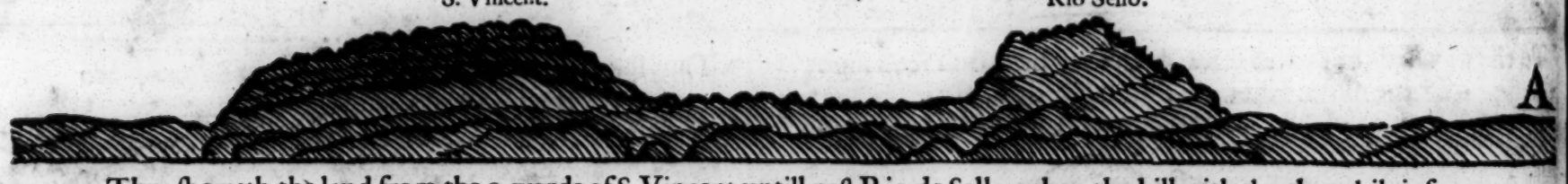


Thus ſheweth the Land from Rio de Sella of, to Cabo de Pinas, when you ſayle alongſt by it.

Theſe foure figures following belong one to the other, the like letters, as AA, BB, CC, one to the other, and is the coaſt from the eaſtwards of C. Vincent to C. de Pinas.

S. Vincent.

Rio Sello.



Thus ſheweth the land from the e. wards of S. Vincent untill paſt Rio de Sella, when the hill with the three hils is foure leagues thwart from you, and Rio de Sella is foure leagues ſouthweſt from you.



Cape Keſgo. Villa Vicioſa. Sand-bay. Sand-bay.

Thus ſheweth C. Keſgo, Villa Vicioſa, and the land to the weſtwards of them, when C. Keſgo is w. 4 leagues, and Villa Vicioſa foure or five leagues ſouthſouthweſt from you.

Sanſoen.



Sand-bay.

Thus ſheweth the land of Biſkaye, when you are thwart of Gion.

This is the remainder of the three former figures, the CC, being joyned together.



Channell to Tores.

Thus ſheweth the land when you are by Tores.

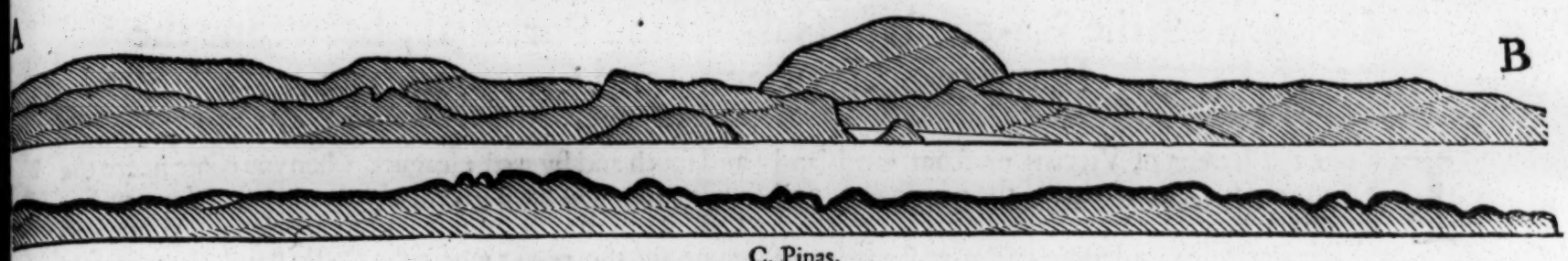
The three figures following one to the other, the like letters one to the other, and ſhew the riſing of the land on both ſides of the Cape de Pinas, to wit, when the Cape Pinas is about foure leagues ſouth, ſomewhat weſterly, and the great hill to the eaſtwardes of it is ſouth e. from you.

Southeaſt.

Southeaſt.



This hill lyeth moſt commonly covered with ſnow.



C. Pinas.



Thus ſheweth the land of Avilles, when you are thwart of it.

Theſe three figures following belong one to the other, at the like letters one to the other, and ſhew the riſing of the land betwixt C. de Pinas and Ribadeus, when you ſayle alongſt cloſe by the land.



This is the eaſtermoſt towards C. de Pinas, when the land againſt Z, is ſouth from you.



Thus ſheweth that land againſt Z, being ſouth from you not farre off.



Ribadeus.

Thus ſheweth the land betwixt Luarca and Ribadeus.

Theſe two figures following belong one to the other at the A A, together.

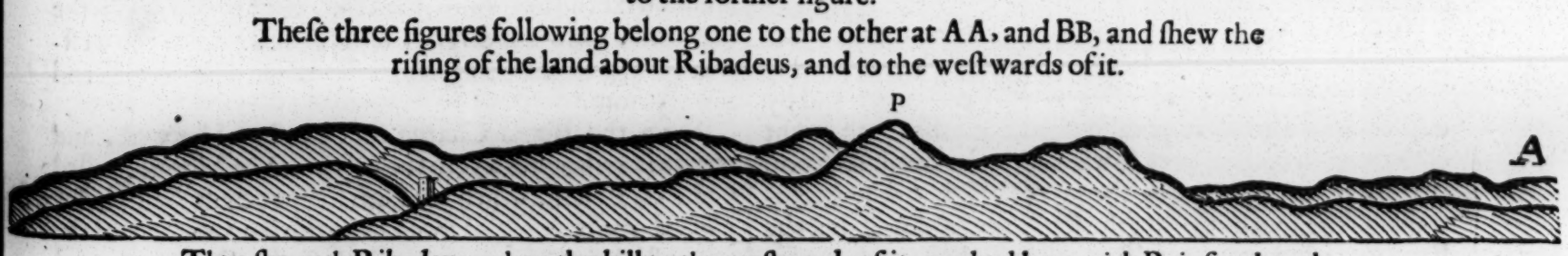


Thus ſheweth Ribadeus, when you are thwart of from it about a halfe league from the ſhoare.



Thus ſheweth the land to the weſtwards of Ribadeus, when the hill by S. is ſouth from you, and followeth to the former figure.

Theſe three figures following belong one to the other at A A, and B B, and ſhew the riſing of the land about Ribadeus, and to the weſtwards of it.



Thus ſheweth Ribadeus, when the hill to the weſtwards of it, marked here with P, is ſouth and by eaſt from you, foure leagues.



This belongeth to the former, the A A, one to the other.



Thus followeth the two former figures to the weſtwards of Ribadeus, the B B, one to the other.

The

The fifth Demonstration.

Which

Delineateth the Sea-coasts of Gallissia and Portugal, betweene the Island of S. Cypriaen, and Camina.

FRom the havens of Viverus or from the Island S. Cyprean to C. de Ortegall, the course is w. and by n. nine leagues.

Betwixt both, a league to the westwardes of Viverus, lyeth the little towne of S. Marcus with a Bay, there men may anchor in 7 or 8 fathom, and ride for a s.s. w. and w. windes.

Two great leagues to the westwardes of S. Marcus lyeth the river of Caryns, there is also good anchoring, and from thence forth unto the Castle of Ortegall; all the coast alongst, it is there every where cleane. From Caryns to Ortegall, the course is northwest, five leagues. Ortegall is a great poynt lying out, to the eastwards of it, men may lye land-lockt for a northwest, w. southwest, and southwinde, thwart of the castle is the best road, there men may anchor in 8 or 9 fathom. When men come from the e. Ortegall is easy to beknowne, they shal see the castle stand against the high land.

C. Ortegall. About a league northnorthwest into sea from the C. de Ortegall, lyeth a great rane off rocks: betwixt them and the foresayd Cape, men may sayle through in ten fathom.

Siverus. From the Cape Ortegall to the C. Prior, the course is southwest ten leagues: betwixt them both lyeth a Towne called Sedaira, by the Dutch Shippers called Siverus, which hath a deepe haven lying in southeast. The north side off the haven is rocky and fowle, which you must avoyd, and run close in by the west land, which is a high land; alongst by it is 12 fathom deepe, within the havens mouth it is ten fathom deepe, you may sayl in untill you come before the towne, and anchor there in 6 or 7 fathom.

C. Prior. Five leagues to the westwardes of Sedeira lyeth the C. de Prior, which is a very ragged hill, to see to a far off, as if it where full of people.

Three leagues from the Cape de Prior, lyeth the haven of Ferroll: betwixt them both lye two little sand-bayes, the southermost (where in stand some little white houses) is the greatest, and lyeth a little to the northwardes of the north poynt off Ferroll; when you come neere the Baye, the haven beginneth to open it selfe, it lyeth e. n.e. and e. & by n. in, amids the channell betwixt two high lands: when you come in, you must presently edge up to the northwardes by the north poynt and anchor there a little to the westwardes of the village it is flat and rocky ground.

For to saile into Feroll from the southward. When you come from the west, or from the Groyne, and will sayle into the haven of Feroll, then goe away from the lite Island S. Blasius north, and north and by west, and run a good wayes about, without the south poynt of Feroll; which is very fowle and rocky untill that you see the haven open, goe then yet so farre to the northwards of the southwards of the south poynt, untill that the haven doe shut againe, and run then right in with the foresayd greatest sand-bay, where in stand the two or three little white houses to the northwards off the haven, untill that you bee within the south poynt, and the fowle grounds which lye off from it; sayle then right to the north poynt of the haven, & alongst by it towards the south side, untill that haven doe open it selfe againe, and runne then (as before) alongst in the middest of the channell. This haven is so narrow in the comming in, that you may cast a stone upon the land on both sides, and in that narrow it is 20 fathom deepe. When you are in the havens mouth, you may see through betwixt the Island Sisarga, and the maine land to the s. wards of it.

For to sayle into the Groyne. To sayle from Feroll to the Groyne, the course is south, and south and by west 3 leagues, when you come neere the westland, you must give it a birth, at least of foure or five Cables lengths, because it is not very cleane. When you come by the poynt where the Castle standeth upon, you shall see then also a little Island with a little house upon it, you may sayle alongst by it within a halfe cables length, and runne about by it up to the westwardes, untill you come before the Fisher village, and anchor there in sixe, seven, or eight fathom.

From Cape de Prior to the Groyne, the course is south and south and by west five leagues.

Haven of Bitanze. Eastnortheast from the foresayd Island where the Castle standeth upon, goeth in a Sound southeast, five or sixe leagues within the land, to Bitanze, where you may anchor on the west side under a row of rocks in 10 or 12 fathom, also you may sayle so deepe in, that you can see no sea.

Ponte de Mas. To the northwards of that Sound, over against the poynt of the Groyne, lyeth also an other haven or Sound, called Ponte de Mas, on the north side lieth a row of rockes, where men run alongst to the southwardes of them: men may also sayle there so deepe in, that they can see no sea. A good wayes within lyeth a great bridge over the River.

He that commeth from the west off from the Island Cisarga & is bound into the Groyne must give the north point, or the west poynt of the Groyne (where the tower standeth) a birth of 4 or 5 cables lengths, as before is sayd, which point is rocky and fowle farre from the shoare, and run then eastsoutheast, and southeast about by the poynt, and afterwardes s.s.e. unto the little Island with the Castle and about by it, as is before sayd.

Island Cisarga. The little Island Cisarga, of the Dutchmen called Cesarie, is fowle round about, & lyeth from the poynt of the Groyne, due east and west distant 7 or 8 leagues, from the haven of Feroll west and by south, from the C. Prior w.s.w. and southwest and by west, and from the C. de Ortegall southwest, and southwest and by west 18 or 19 leagues.

Queres. From the Island Cisarga south and by west, and s.s. west lyeth Queres, a good haven also for great ships, the west shoare is cleane, but the east shoare is fowle, therefore men must sayle alongst by the west shoare, when they are betwixt the two lands, then they must goe in amids the channell, unto the poynt, and then run up to the westwardes a great halfe league in, and anchor there in 7, 8, and nine fathom.

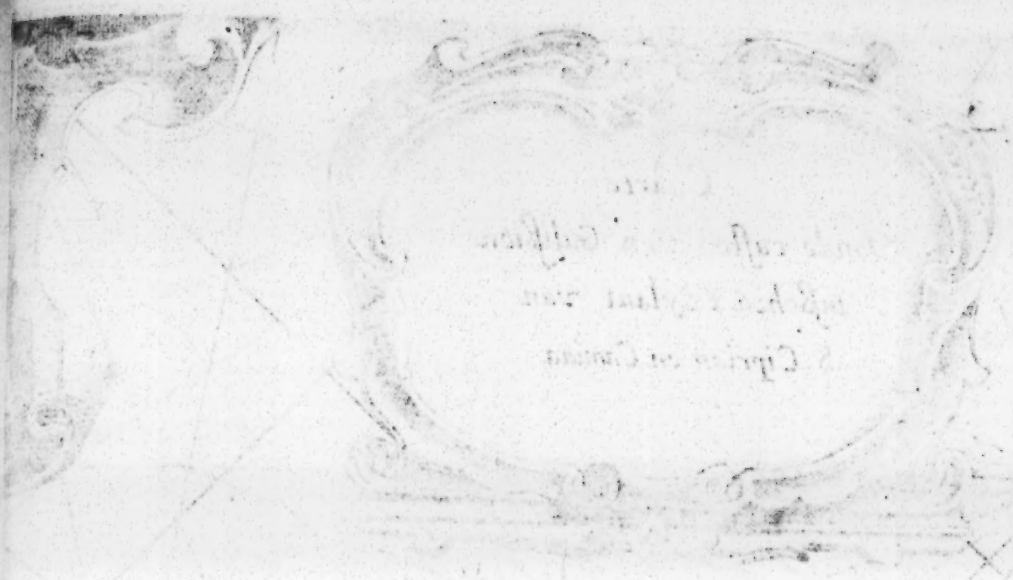
C. de Bylem. From the Island Cisarga southwest and by west, and w.s.west 12 leagues, lyeth the east point of Monsie, called Cabo de Bylem, which is a high steepe poynt, with many ragged rocks lying of loose from the land, where of the greatest, being like a tower, doth shew it selfe black, and is called the Munck.

There lyeth also a great rane off rockes right before the haven or sound of Monsie, southwest and by south from the Munck, at least two or three cables lengths long, but the innermost end of it lyeth from the Munck south and by west. When men fal with the land of Monsie, it is all double land, about the Cape de Finesterre lyeth a high white sand, lying in within the land sandbay.

Also men may see comming about the C. de Finisterre a ragged hill which runneth alongst so farre to the southwards that men may see it before the Mores.

Monsie. He that is bound in for Monsie, comming from Cisarga, must goe in close alongst by the C. de Bylem, or Bellem:

this



Caarte Vande cuſten van Galiſien tuſſchen 't Eylant van S. Ciprian en Camina

I. S. Ciprian

S. Marcus

Viverus

Karyns

Caſtel van Ortegael

C. de Ortegal

Silerus

Ferol

C. de Prior

Punta de Llas

Bitanzos

Lontarine

Corunna

I. Cyſarga

Quores

Mugie

Mannick

C. de Balem

Corco bagona

Ulaff

Baje

Mange berg

C. Coriane

Dorp Mares

G

A

S

1 2 3 4 5 6 7 8 9 10 11 12 13

Duytſche mylen 15 in een graadt

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15

Spaanſche mylen 17½ in een graadt

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17

Engel: en Franſ: mylen 20 in een graadt

I

S

E

N.

Ponte Vedra

Aldaria

Rondela

Vigo

Camina

Bajona

Clogſter

Monte S. Regio

C. de Phyſdis

Can nas

R. Roxo

Boos

Porto novo

Cambado

S. Thomas

Prony

Roxo

Blydones

Monte Carbela

Villa nova

I. Salure

Clip

Monte Faure

de Finisterre

50

The W
Arch
al o
Mon

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this poynt is altogether a ragged high ſharpe land of ſteep rocks, as before is ſayd, and when you are by that poynt, then you muſt keep the Cape de Coriane a ſhipps length without the C. de Koto, ſoo long untill that the Church of S.Maria come without the poynt of Monſie; run then in at the eaſter channell ſ.ſ.e. upon theſe markes, untill you be paſt the Church, then you ſhall ſee a row of rockes, run in behinde or within them, and anchor there before the village of Monſie in 5, 6, or 7 fathom. When you ſaile thus from the cape de Bylem to Monſie, then the rocks (which lye in the middeſt before the Haven) remaine about an Engeliſh mile to ſeawards on the weſt ſide of you.

The Weſter channell off Monſie.

For to ſayle in at the weſter channell, you muſt go in e. ſ. e. indifferent neare alongſt by the land, and when the foreſayd Ladies Church commeth without the poynt, then you muſt ſayle towards the Rockes, which lye before Monſie, as is before ſayd, and anchor within the rockes in 7 or 8 fathom, but runne not too farre in, becauſe there ſhooteth off a ſhoaly riffe alongſt the Haven, where off you muſt take heed.

The eaſter channell of Monſie.

The eaſter channell is better to come into, then the weſter channell, ſayle not into Monſie before that you ſee the foreſayd Church without the poynt, you may alſo anchor on the n. ſide off the haven in 5, 6, or 7 fathom.

To the ſ. wards of the village of Monſie is a bay where the foreſayd riff or ſhoale lyeth before, lying e. n. eaſt at leaſt 2 cables lengths alongſt the Haven.

Out Ladies Church and the Munck lye one from the other n. and by e. and ſ. and by w.

Southweſt from the cape de Bellem 3 leagues lieth the Cape de Coriane.

C. de Coriane.

From cape de Coriane it is ſouth and n. three leagues to Cape de Finiſterre: betwixt the two capes is Sand-bay where men may anchor to the e. wards of a great rock in ſix or ſeven fathom. This is a great Bay which goeth in far into the land. At the n. ſide of this Bay lye rocks under water, where of men muſt take heed.

Seche. Corco. Bayone.

About a league to the eaſtwards of cape de Finiſterre on the ſouth ſide, lyeth the Haven of Seche or Corcovia, & is called by the Dutch Schippe-maſters, Corck Bayone. Betwixt this Haven and the cape lye two ſandbayes, the firſt, or that which is next unto the cape, is the greateſt, and by the ſecond goeth in this Haven north, in eight & nine fathom. On the eaſt ſide of the Haven lyeth a great Rocke, and about ſouthſouthweſt off from that Rock, almoſt in the middeſt of the Haven, lyeth a ſuncken rocke under water: but run in north untill you eſpye the towne on the weſt ſide, and anchor there in ſix or ſeven fathom. Within upon the River lieth alſoo a Village, or little towne, about n. northeaſt from you.

Mores.

From cape de Finiſterre to the Haven off Mores, the courſe is ſ. e. 5 great leagues, when you come about the Cape de Finiſterre, you ſhall ſee a high ragged hill which runneth ſo farre to the ſouthwards, that you may ſee it alſo before Mores, that is a good mark for to know the land by thereabouts.

When the foreſayd ragged Hill is N. e. from you, then are you thwart of Cape de Finiſterre, and then the hill Monte Lauro, which lyeth upon the n.e. poynt off Mores, lyeth e. n. e. from you, that is a high cloven hill which is alſo good to know.

Southeaſt three little leagues from the Cape de Finiſterre, lyeth a rane of rockes under water, and eaſtſouth-eaſt about two leagues from theſe rockes, lye alſo ſome rockes above water a little to the northwards of Monte Lauro, or the Sound of Mores, and lye from Monte Lauro weſt and by ſouth. Alſo there lye a deale of rock to the ſouthwards of this Sound of Mores, and right in the midſt of the Sound lyeth alſo a ſuncken rock about ſ e. off from Monte Lauro.

For to ſayle into Mores.

He that wil ſayle into Mores, he muſt bring Monte Lauro northeaſt and by north of him, and ſayle in ſo right with it, and then hee ſhall not come too neere the fowle ground or dangers: when hee commeth then by Monte Lauro, hee ſhall ſee the foreſayd rocks lying out to the northwardes off Monte Lauro, he muſt leave them as alſoo the poynt of Monte Lauro two or three cables lengths on the larboard ſide of him, and ſayle in ſo alongſt by them, untill that hee come paſt the ſecond poynt, leaving the ſunken rock (which lyeth in the midſt of the Sound) on the ſtarboard ſide of him: and when the fiſher village which ſtand to the northwards off Monte Lauro commeth to ſtand altogether bare, then he is within the ſunken rock which lyeth in the midſt of the Sound ſouth and by eaſt eaſterly from the e. end of the foreſayd Fiſher village.

When you come by the ſecond poynt, you muſt runne in about it within a cables length, and edge up to the northwards, untill you come before the village, or up to the weſtwards before the towne, where you pleaſe, and anchor there in 12 or 13 fathom.

For to ſayle into Rio Roxo

If you will ſayle into Rio Roxo, then run about without the rockes, which lye to the ſouthwards of the Mores, and goe in ſoutheaſt and by ſouth, untill that you come before the Haven of Rio Roſſo, or Roxo, then you ſhall ſee a great many off rocks, lying off from the northland, allmoſt unto a great rock, or Iſland, called Salure: betwixt theſe rockes that lye out there, and the Iſland Salure, you may well run through about to the northwards of the Iſland, but it is very narrow, by reaſon of the a foreſayd rockes, which lye of from the north land, therefore ſayle about to the ſouthwards of the ſame Iſland, indifferent cloſe alongſt by it, leaving it on the larboard ſide, or to ſeawardes of you untill that you ſee the Sound open, and then runne in keeping the middle of the channell, unto that Iſland Roxo, which you ſhall ſee lye in the middeſt of the haven, when you come neere it, you may anchor under the ſ. land, there are two Sand-bayes, where is good anchor ground.

About two leagues ſouthweſt from Rio Roxo lyeth a ſuncken rock, John Claeſz. Bors of Sardam, did ſayl upon it, and there loſt his ſhippe the 20 of February 1613. in the night.

Ponte Vedra.

From Rio Roxo, or the Iſland Salure, unto Ponto Vedra, or the Iſland Blydones, the courſe is ſouthſoutheaſt foure leagues, betwixt them both it lyeth an Iſland called Monte Carbela; within it, is three fathom deepe. Right before the haven of Ponte Vedra lyeth the Iſland Blydones, which men may ſayle round about. On the north ſide it is not deeper then five or ſixe fathom. There lye alſo within the Sound, on the north ſide two rockes called the Boos or Oxen. On the ſouth ſide of Blydones is the right fareway for to ſayle into Ponte Vedra, this haven lyeth in northeaſt untill within the Iſland; ſomewhat further in the midſt of the haven lieth alſo another little Iſland, which you muſt alſo goe to the ſouthwards of, therefore goe in eaſtnortheaſt alongſt by the ſouth-land, untill that you ſee the flat tower which ſtandeth upon the ſouth-land, & then you muſt run over a banck, right on with the point of Ponte Vedra, within it lyeth the towne, thwart off the flat tower, men may anchor in 8 or 9 fathom: This haven is at ſome places foure fathom deepe.

M.Carbela. Blydones.

Iſlands of Bayone.

Five leagues to the ſ. wards of the Iſlands of Blydones lye the Iſlands of Bayone, when men come in out of the ſea, right with them, then theſe Iſlands doe ſeeme to be all gray and black rockes, and lye to ſee to, as if they were three Iſlands, although that the ſea doe run through them, but at one place, betwixt each is a ſaddle or valley.

Within the land alongſt over theſe Iſlands, men ſhall ſee two high hills very eaſy to bee known, the eaſtermoſt hath three high hommocks, and the weſtermoſt two with valleys betwixt the hommocks; a little to the eaſtwards off the eaſtermoſt hill men ſhall ſee a white Abbey, ſtand againſt the high land, whereby this land is very eaſy to bee knowne.

For to ſayle into Bayone, from the northwards.

You may ſayle within theſe Iſlands of Bayone either to the northwards or to the ſouthwards; but at the north e. poynt of the Iſlands lyeth a rocke under water, about a cables length off from them, where of you muſt take

heed, & anchor in 10, 11, or 12 fathom on the eaſt ſide of the Iſlands.

Hee that will ſayle in to the northwards, muſt run in betwixt the Iſlands and the maine land, keeping neere about the middle off the channell, but neereſt to the Iſlands untill that the Sound off Vigo, or Cannas bee open, and then ſayle in to the eaſtwards there is a broad Sound, where men may anchor on both ſides, to wit, on the ſouth ſide before Vigo, and on the north ſide before Cannas in twelve or thirteene fathom.

Vigo & Cannas.

Alſoo men may ſayle further in about the ſouth poynt of Rondella, where men may ſave a ſhippe in the oaze, without anchor or cables.

At the point of Vigo lyeth a little Iſland, he that commeth in to the northwards of the Iſlands, and is bound in for Bayone, may ſayle through betwixt that little Iſland and the point Vigo, right in with Bayone, to wit, alongſt a little to the weſtwards of the poynt, untill hee come before the towne, and anchor there in 4, 5, or 6, fathom.

Betwixt that foreſayd little Iſland, and the poynt of Vigo, it is at high water 4 fathom and a halfe, & at low water three fathom and a halfe deepe, men muſt (ſayling through there) give the poynt off Vigo a birth, becauſe of ſome ſuncken rocks that lye off from it. When as men lye in the roade before Bayone, in 5 or 6 fathom, they may ſee the Iſlands of Blydones through betwixt the foreſayd poynt of Vigo, and that little Iſland.

From that ſame little Iſland lyeth to the weſtwards another little Iſland or rocke, betwixt them both it is fowle, ſo that men cannot ſayle through betwixt them, and from that weſtermoſt little Iſland lyeth a fowle riffe of ledge of rockes, ſ. w. off towards the point of the land off Bayone, where of men muſt take very good heed, whether you come from the n. wards & will ſayle through betwixt that riffe & the Iſlands off Bayone, or els come in from the ſ. wardes, betwixt the Iſlands and the maine, and will goe in for Bayone.

That riffe lyeth at low water in many places dry, the outermoſt rockes thereof, and the poynt of Bayone, where the Caſtle ſtandeth upon, lye ſoutheaſt and ſoutheaſt and by eaſt, and northweſt and northweſt and by weſt an Engliſh mile aſunder, therefore he that commeth from the northwards, and will goe into Bayone to the weſtwards off that riffe, that is betwixt the riffe and the Iſlands let him goe ſo long to the ſouthwards, untill that the Caſtle of Bayone come to be e. ſ. e. and eaſt and by ſouth from him, and ſaile then towards it, and then he ſhal run farre enough alongſt to the ſouthwards of it.

At the ſouth end of the Iſland of Bayone, lyeth a great rock, with a deale of ſmall rockes round about it, men may ſayle very cloſe alongſt by them, but at high water the outermoſt rocks lye under water, where of men muſt be mindfull, cloſe by the rocks it is 20, and 25, and 26 fathom deepe. From the poynt of the maine land over againſt the ſouth end of the Iſlands, runneth off a ledge of rocks, whereupon it breaketh very much, when the ſea is grown, where of alſo men muſt take heed.

When you come from the ſouthwards, or out of the ſea, and will ſayle in for Bayone, about to the ſouthwards of the Iſlands with a ſoutherly or ſouthweſt winde, then run right with the ſouth poynt of the outermoſt land of Bayone, untill you come neere about a halfe league of the land, and then alongſt by the ſhoare, unto the outer point on the ſouth ſide of the comming into the Bay, where that foreſayd riffe runneth of, which lyeth off low, give that riffe a birth, and run in betwixt it and the foreſayd rockes at the end of the Iſlands, northeaſt, or eaſtnortheaſt in, according as you ſhall come in out of the ſea, leaving the riffe on ſtarboard, and the rockes with the Iſlands on the larboard ſide untill that you come to the end, or to the n. wards of the riffe, the north end, or the outtermoſt poynt of that riffe at the ſ. poynt, and the poynt Bayone where the Caſtle ſtandeth upon, lye neareſt e. and by north, and w. and by ſouth a little league aſunder. When as then you have the foreſayd riffe (on the ſouth ſide) upon your broad ſide, or els are too the northwardes of it; and that the Caſtle doe ſtand eaſt, or thereabouts from you, goe then right in with the Caſtle leaving that foreſayd other riffe (which lyeth off ſouthweſt from the little Iſlands at the poynt of Vigo) on the larboard ſide of you. If you bring the poynt of the Caſtle not to the ſouthwardes of e. ſ. e. then you cannot take any hurt of the northermoſt riffe.

Iſland of Bayone.

The outer rocks of that northermoſt riffe, (which ſhooteth off from the two foreſayd little Iſlands) and the riffe which ſhooteth off from the ſouth poynt of the land of Bayone, where men muſt ſayle through betwixt lye one from the othere ſouthweſt, and ſouthweſt and by ſouth, and northeaſt and northeaſt and by north about an Engliſh mile aſunder. When you come neere the Caſtle, then come not very neere the ſhoare, which is not very cleane, and when, as then you come thwart of the innermoſt poynt of the Caſtle before that you begin to ſee the Towne of Bayone, from behind the poynt, you muſt looke well out before you: for from that ſame innermoſt poynt, and from the Caſtle, there lyeth off a ſuncken rock about halfe a cables length from the foreſayd poynt, where upon remaineth at low water no more then nine or ten foote water, keepe therefore (thwart off it) ſomewhat off from the poynt. When as you begin to ſee the Towne off Bayone, then luffe up ſuddenly ſouth and ſayle before the Towne, and anchor there in five or ſixe fathom, where you pleaſe, or els that the poynts of the Caſtle come againſt the weſtermoſt Iſland of the two which lye off from the north poynt of the Bay, or poynt of Vigo, there it is good oaſie ground that holdeth well, ſet your anchors when you moore, northweſt and ſouthweſt, the beſt anchor to the ſoutheaſt; from thence over the high land you ſhall have commonly the hardeſt windes.

For to ſayle in to Vigo or Cannas from the ſouthwards.

If you muſt turn too & againe into the bay, then take very good heed, when you run off from the Caſtle, that you run not to far over ſ. ſ. e. right before the Towne, ſ. e. and by eaſt, & e. ſ. e. from the roade about a musketſhot, lyeth another ſunken rock, which at low water is even uncovered, it lieth a ſmall cables length off from a little poynt in the ſouth poynt of the Bay, whereupon ſtandeth a little houſe, appearing a farre of like a great green rock; you muſt be very carefull of it; eſpecially when you runne over towardes the ſouthſoutheaſt.

But hee that is bound into Vigo or Cannas to the ſouthwardes of the Iſlands, ſhall ſayle in betwixt that ſouthermoſt Iſland and the poynt of the land of Bayone, all alongſt in the middle of the channell, northeaſt, or northeaſt and by north in, at leaſt two great leagues, keeping the norther haven two ſhippes lengths open, ſo long untill Cannas come to the north-land without the poynt of Vigo: and then hee muſt leave the poynt of Vigo on the ſtarboard ſide of him, & run in (keeping the middle of the channell) betwixt the northland and the Towne Vigo, and anchor there either before Cannas or Vigo, where hee pleaſeth in ten or twelve fathom.

S. Rego

A little to the northwards of Camina, lyeth on the coaſt a high ſteep hill, above in the top with a clift or ſaddle, being called S. Rego, it is allmoſt of faſhion like Monte Lauro, but at leaſt once ſo high againe, this hill is a very good mark for to know the places thereabouts. About halfe wayes betwixt this hill and Bayone, lyeth an Abbey upon the ſide of the land, that is alſo a good marke for to know Bayone for him that commeth from the ſouthwardes, but the chiefeſt markes are the two foreſayd high Hills within Bayone, the one with two, the other with three hommocks, when that with the three valleys or ſaddles is e. ſ. e. from you run in then right with it, you ſhall not faile to fall with the land, right with the Iſlands.

Five leagues to the ſouthwards of the Iſlands of Bayone, lyeth the haven of Comina, a broad haven, where you muſt go in (with great ſhips) at the higheſt water. In the havens mouth, which lyeth in northeaſt and by eaſt, lyeth a rock neereſt the ſouth ſide; cloſe to the northwards of this rock, is the deepeſt water, for to ſayle in or

in or out. Within in the haven, on the north ſide, lyeth a little Iſland, and upon it ſtandeth a little Tower, you muſt keep that over the Tower, which ſtandeth upon the northland, and ſo muſt run in right with them.

In this havens mouth is at halfe flood two fathom water.

At the northſide of the haven it is altogether ſhoale water, and very rocky and fowle: there ſhooteth off a ledge of rocks or riffe where of men muſt take good heed.

Of the Tydes and Courſes of the Streames.

On theſe coaſtes, as on the former, a ſouthweſt and northeaſt moone maketh high water.

A ſouthweſt and northeaſt moone maketh full ſea at the foreſayd places, on the ſea-coaſt, and within the havens a poynt later.

A northeaſt & ſouthweſt Moon maketh on theſe coaſts full ſea, like as on all the coaſtes lying on the great ſea, there goe alſo no ſtreames alongſt the land, becauſe (through the ſwelling off the Ocean ſea) the flood commeth right on againſt the coaſtes, and falleth right in and out at the Havens.

How theſe landes doe lye one from the other, and from other lands.

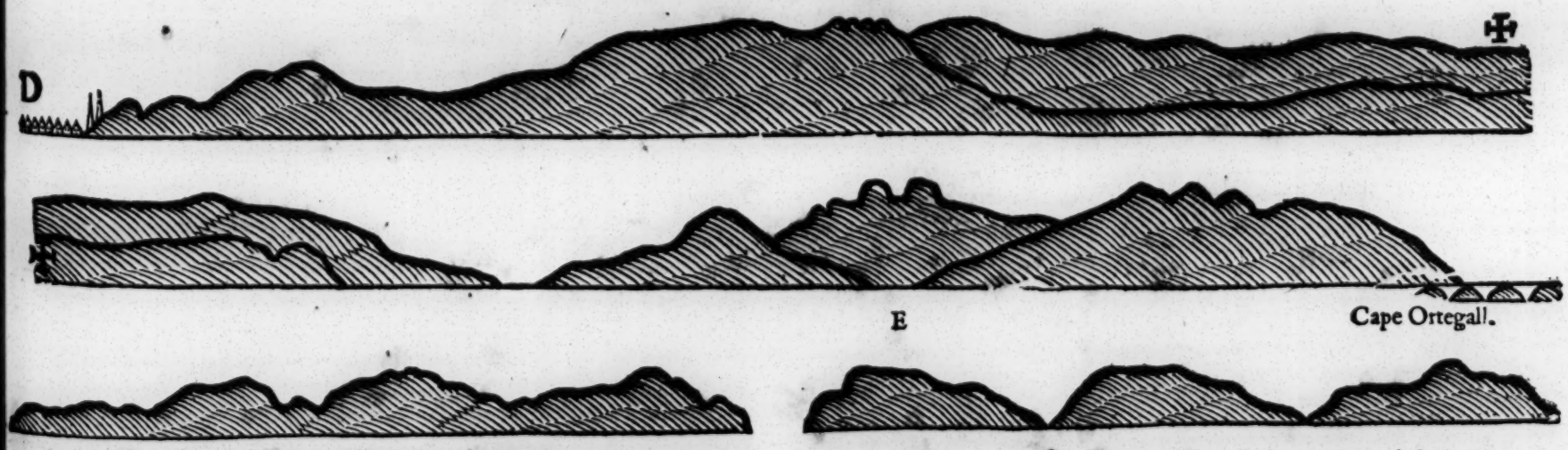
From Cape Ortegall to Siverus ſ.w. 5 leagues.
From Siverus to Cape de Prior ſ.w. 5 leagues.
From Cape de Prior to Feroll ſ. and by e. 3 leagues.
From Feroll to the Groyne ſouth, and ſouth and by weſt, 3 leagues.
From the Groyne to Ciſarga 7 or 8 leagues.
From Ciſarga to Queres, ſouth and by weſt, and ſouth ſouthweſt 2 leagues.
From Ciſarga to Cape de Bylem; or the eaſt poynt off Monſy, ſouthweſt and by weſt, and weſtſouthweſt, 12 leagues.
From Cape de Bylem to Cape de Coriane, or Torrivian ſouthweſt 3 leagues.
From Cape de Coriane to Cape de Finiſterre ſ. 3 leagues.
From Cape de Ortegall to Cape de Prior ſouthweſt, 10 leagues.
From Cape de Ortegall to Ciſarga ſouthweſt and ſouthweſt & by weſt 19 leagues.
From Cape de Prior to Ciſarga ſouthweſt and by weſt, 8 leagues.
From Feroll to Ciſarga weſt and by ſouth 8 leagues.
From Cape de Ortegal to Cape de Coriano ſouthweſt & by weſt 33 leagues.
From Cape de Ortegall to Waterford in Ireland north, 168 leagues.
From Ciſargo to Cape Veio north 160 leagues.
From Ciſarga to Silly north and by eaſt 137 leagues.
From Cape de Finiſterre to Moores, or Monte Lauro ſoutheaſt 5 leagues.
From Rio Roxo to Ponto Vedra ſ.ſ.w. 4 or 5 leagues.
From Ponte Vedra, or Blydones, to the Iſland off Bayone ſ.ſ.e. 5 leagues.
From Bayone to Camina ſouth and by eaſt 4 leagues.
From Cape de Finiſterre to the Iſland of Bayone the courſe is ſ.e. and by ſ. 20 leagues.
From Cape de Finiſterre to Port a Port ſ.ſ.e. 42 leag.
From Cape de Finiſterre to Avero ſouth and by eaſt and ſ. ſ. eaſt 53 leagues.
From Cape de Finiſterre to the Burlings ſouth 67 leag.
From C. de Finiſterre to the great Canaries ſ. ſouth weſt ſoutherly 307 leagues.
From Cape de Finiſterre to the Salvages ſouthſouthweſt 273 leagues.
From Cape de Finiſterre to the Iſle of Madera ſouthweſt & by weſt ſoutherly 197 leagues.
From Cape de Finiſterre to the Iſle S. Michael weſt ſouthweſt 247 leagues.
From Cape de Finiſterre to the Iſle Tercera w.ſ.w. and w. and by ſouth 278 leagues.
From Cape de Finiſterre to the ſ.weſt point of Ireland n. and by weſt and n. 173 leagues.
From Cape de Finiſterre to Cape de Claro North, 173 leagues.
From Cape de Finiſterre to Waterford, or to the Southeaſt poynt of Ireland, north and by eaſt 185 or 186 leagues.
From Cape de Finiſterre to the Lizard northnortheaſt, 153 leagues.
From Cape de Finiſterre to the Seames, n.eaſt and by n. northerly 112 leagues.
From Cape de Finiſterre to Bell-Iſle n.e. 122 leagues.
From Bayone to the Burlings ſ. and by w. 49 leagues.

Heights.

Cape de Ortegall lyeth in 44 degrees 5 min.
Cape de Coriane in 43 degr. 8 min.
The Cape de Finiſterre lyeth in 43 degrees.
Bayone lyeth in 42 degrees 10 min.

How theſe Lands doe ſhew themſelves at Sea.

Theſe 2 figures following belong at croſſes one to the other, & ſhew the riſing of the Land, a little to the e. wards off the Cape Ortegall, when the poynt marked with D, is 5 or 6 leagues e. and by ſ. or e. ſ. e. from you, and the hill marked with E, is ſ. ſ. w. from you weſterly.



When Ortegall is ſ. e. from you, it ſheweth it ſelfe thus.

Thus ſheweth Ortegall, when it lyeth ſ. e. and by ſ. from you.



Thus ariſeth Ortegall, when the eaſtermoſt hill lyeth ſ. ſ. e. from you, and that you may ſee the eaſt end with cleare ſight, being eight, nine, or ten leagues off at ſea.

C. Ortegall.



Theſe two figures belong at the double croſſe, one to the other, and ſhew the Cape Ortegall, with the land to the weſtwards of it, when the foreſayd Cape is eaſt and by ſouth five or 6 leagues from you.



The land to the eaſtwards of the Groyne ſheweth thus, when it is ſouth and by eaſt from you.



Cape Prior the eaſt poynt of the Groyne ariſeth in this forme.



Cape Prior being ſouthweſt from you 6 or 7 leagues ſheweth it ſelfe thus.



Cape Prior, being ſouthweſt & by ſouth from you 4 or 5 leagues, ſheweth it ſelfe thus.



C. Prior.

When the Cape de Prior is eaſt and by north, eaſterly 3 or 4 leagues from you, it ariſeth in this forme.



Thus ſheweth the Iſland of Ciſarga, when you are one league thwart from it.

Thus ſheweth the land of Monſie, betwixt Ciſarga & Cape de Finiſterre, when you come from the eaſt, and ſayle alongſt by it.



When Cape de Finiſterre is ſouthſoutheaſt from you, then it ſheweth thus.



The Cape de Finiſterre, being ſoutheaſt ſoutherly from you, ſheweth it ſelfe thus.



Thus ſheweth Cape de Finiſterre when it is ſoutheaſt eaſterly from you.



When Cape de Finiſterre is ſoutheaſt & by eaſt from you five or ſixe leagues then it ſheweth it ſelfe thus.



Thus doth Cape de Finiſterre ſhew it ſelfe, when it lyeth 5 or 6 legaues eaſt and by ſouth from you.

Moninck.



Theſe three figures following belong one to the other, at the letter A A, and BB, and ſhew the riſing of the Capes de Coriane and Finiſterre, as is ſhewed in the deſcription here under following.

The



The Cape de Finiſterre ſheweth it ſelfe with the land to the ſouthwards of it, as is pourtrayed in this & the figure following, when the Ragged hill ſtandeth eaſt from you 3 or 4 leagues, & then you ſhall ſee the land to the northwards of it, unto Cape Coriane, northeaſt, unto paſt Cape Coriane, in forme, as in the figure before this.



This followeth the former, and lyeth from the Cape of ſoutheaſt and by ſouth.



Thus ſheweth the Cape de Finiſterre, when the ragged hill lyeth eaſtnortheaſt eaſterly from you, and then the land of Moores lyeth from you eaſtnortheaſt, as is here following demonſtrated.



Thus ſheweth the ragged hill of the Cape de Finiſterre, when it lyeth eaſt and by north from you.



When the Cape de Finiſterre lyeth northeaſt from you, and the land of Moores eaſtnortheaſt, 6 leagues from you, then lyeth the Cape in three parts, and the land of Moores thus.



When the ragged Hill betwixt the Cape de Finiſterre and Moores lyeth eaſt and by north from you ſix leagues off, then it ſheweth thus.



When the high land off Moores is northeaſt & by north from you about 6 leagues, then it riſeth in this forme.

Monte Lauro. The high land of Moores.



When Cape de Finiſterre is northeaſt or northnortheaſt, and Monte Lauro is eaſtnortheaſt 5 leagues from you the high land of Moores ſheweth it ſelfe thus.



Iſland of Bayone.

Thus ſhew themſelves the Iſlands of Bayone, and the high land to the ſouthwards of them, when the foreſayd Iſlands are eaſtſoutheaſt, a league or two from you.

Bayone. Abbey. S. Rego.



When the poynt of Bayone is eaſtnortheaſt, and the high land is eaſt from you, then it riſeth thus, to the ſouthwards of it lyeth the high Hill of S. Rego.



Bayone. Abbey. S. Rego.

When the high Hill S. Rego is eaſt from you, then the high land of Bayone ſheweth it ſelfe thus. Thus Abbey ſtandeth about halfe wayes betwixt S. Rego & Bayone.

The ſixth Demonſtration,

Where in

Are ſhewed the Coaſts of Portugal, from Camina to Paſſage.

Viana. SEven leagues to the ſouthwards of Camina lyeth Viana upon a river. From the north poynt lyeth off a ledge off rockes thwart over before the mouth of the river, and upon the ſouth ſhoare, ſtand two Fire-towers. If you will ſayle in to this river off Viana, comming from the northwards, or out of the ſea, then run ſo long to the ſouthwards untill that the two foreſayd Fire-towers upon the ſouth ſide of the rivers mouth, come one to the other, and then run in right with them towards the ſtrand, untill that the little tower upon the north-land come over the two houſes; keep them one to the other, & runne then to the rock with the maſt, and ſayle alongſt cloſe to the eaſtward of it, and then you run in alongſt over the Barre or the ſhoaleſt of the rivers mouth, there is at low water with an ordinary tyde two fathom depth. When you are paſt the foreſayd rock with a maſt or beacon, which lyeth on the north ſide of the river: run in likewiſe cloſe alongſt to the ſouthwatds of it, and afterwards indifferent cloſe alongſt by the north-land, untill you come before the Town, there runneth of ſometimes a little riffe which you muſt give a birth to, and anchor before the town. When you lye before the towne, there lyeth a little Iſland to the ſouthwards of you, where upon ſtandeth a little Chappell: to the weſtwardes of that little Iſland lyeth a great Banke, which at low water is uncovered, behind that banck it is five and ſixe fathom, & before Viana ſeven, eight, and nine fathom deepe; when you come in, they may run in about to the ſouthwards of this foreſaid Banck, and come out again before the town, by the little Iſland, where the little houſe ſtandeth upon.

When you come in about a bow ſhot within the ſecond rock with the maſt, there you may well let fall your anchor and bring Cables on the ſouth ſhoare, and moore there by foure cables.

Men may anchor without in the road in 12 fathom, there is the cleaneſt ground for to take in a Pilot. It is a narrow and dangerous barre for to come into.

From Viana to Port a Port, the courſe is ſouth & by eaſt 12 or 13 leagues, betwixt both lyeth Villa del Conde,

Villa del Conde. ſeven leagues from Viana and from Metelyn. Villa del Conde is a broad haven, before the haven mouth lye many rockes, where men may ſayle in about them on both ſides, to the northwards or to the ſouthwards of them it is five and ſixe fathom deepe; further in lyeth a bank thwart over the haven of two fathom at high water: within in the haven it is 3 or 4 fathom deepe, on the n. ſide it is all full of rocks, which lye moſt under water, but on the ſouth ſide it is deepeſt & ſureſt, and good lying in five and ſixe fathom.

Foure leagues to the ſouthwardes of Villa del Conde

Rockes Leſons. lye out the great rocks, called Leſons, right before a little Broad-haven of two fathom depth, called Metelyn, and ſouthweſt from the ſouth poynt of the foreſayd rockes Leſons; about a halfe league to ſeawards, lyeth a ſuncken rock under water: betwixt the land & the Leſons it is 6 and ſeven fathom deep.

A league to the ſouthwardes off the rockes Leſon lyeth

Port a Port. Port a Port. From the north poynt off the rivers mouth lye off many rockes, allmoſt thwart over the channell. For to ſayle in there, you muſt run in cloſe alongſt to the ſouthwardes of the outermoſt rock, even ſoo neere by it that you may caſt with a ſtone upon it. There ſtandeth a little Chappell upon the north ſhoare right againſt the rock with the croſſe, and alſoo a little white houſe upon the north ſhoare ſomewhat further up upon the river, bring them one in the other, and run in ſo right with them untill you bee paſt the Caſtle. In ſayling in ſo, you ſhall not finde leſſe upon the ſhoaleſt off the Barre, then 17 or 18 foot water at halfe flood, & ſhall not come too neere a ſuncken rock, which lyeth without in the rivers mouth, ſomewhat neerer the ſouth ſhoare then the north, whereupon there remaineth at low water no more then 11 or 12 foote water. Being within the Caſtle, goe then right towardes the rock with the croſſe, and ſo cloſe alongſt to the ſouthwards of it, that you may reach it with a boat hoock, or els you muſt run in three or 4 ſhips lengths to the ſouthwards off it, or alongſt by the ſouth-land, untill you bee paſt the rock with the croſſe, for to avoyd a ſuncken rock, which lyeth thwart of it a little to the ſouthwards of it, and at low water is no more then eight foot under water. Being a little paſt the rock with the croſſe, go then up alongſt in the middle of the channell, untill you come thwart of a great white Tower upon the north-land, there you may anchor in 4 or 5 fathom, or ſayle before the Towne, here it is 3 & 4 fathom deepe. A little paſt the rock with the croſſe is a ſhoale, whereupon remaineth at low water no more then 11 foot water, ſoo that with ſhippes that draw 12 foote water, men muſt ſtay for high water, it floweth there ſix foot up and downe with an ordinary tyde.

On the ſouth ſide of the river goeth in alſoo a Land-deep to the ſouthwards of the foreſayd ſunken rock, which lyeth in the rivers mouth, where the Pilots ſometimes bring ſhips in and out, that is a good channell, and oftentimes it is eaſt too againe of the ſea, ſo that there is no certainty to be written of it, that men ſhould truſt upon.

From Port a Port to Avero, the courſe is ſouth, ten leagues: betwixt them both it is all alongſt a cleane ſand-ſtrand, where men may bebold to come neere the ſhoare every where in ten or twelve fathom.

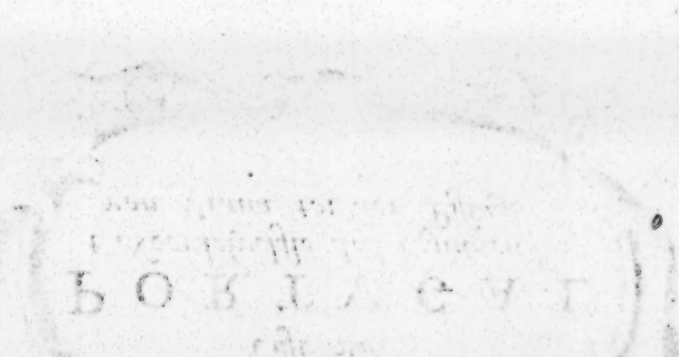
Within the land upon the high land lyeth a black hommock in the land, when that lyeth eaſtſoutheaſt from you, then you are open before Avero: when you cannot ſee the black hommock Carmole, then lyeth there a rough ſand-hill to the northwards of the Barre, when that is thwart of you, then are you a halfe league to the northwards of the Bar of Avero.

If you will ſayle in over the Barre of Avero, and that you come before it in ſixe or ſeven fathom, then take heed to three beakons made off maſt, which ſtand upon the ſouth-land, bring them one in the other, and ſayle in ſo right with them eaſt and by ſouth, and e. ſ. e. in over the barre, there is comming in, at halfe tyde, no more then two fathom water, untill that you come by the beakons, you ſhall ſo (being come within the poynts) ſayle alongſt by a dry ſand on the larboard ſide, edge then up north-northeaſt, and northweſt about by that foreſayd dry ſand, untill you come cloſe to the norther land, and run in by it, and then you ſhall leave all the other ſhoals on the ſtarboard ſide, untill that you ſee the River open, and then you ſhall ſee a little houſe upon the ſtrand on the weſt ſide, goe then from thence up into the River, eaſt and by ſouth, and eaſtſoutheaſt, keeping the middle off the channell betwixt the two lands, untill you come before the Saltponds or Avero, where you may lade your ſhip with ſalt.

The Coaſt of Portugall about Viana, is very eaſy to bee knowne, by the foreſayd hill of S. Rego, which is exceeding high, and lyeth on the ſea ſide: the high land of Viana lyeth two or three double within it.

Betwixt Viana, Ville del Conde, and Port a Port, men

ſhall



Cust van

PORTVGAL

t'Noordelyckste deel beginnende van Viana tot aen Pissage.

P O R T U G

Viana

Barca

Ville del Conde

Nevos

Egrosende

Xarana

Porta Port

Clooster

Villa nova

Mirigay

S. Anthoni

Clousemar

Mford

S. Nicolaus

S. Tomé

Castel

Duytſche mylen 15 in een graadt

Spaanſche mylen 17½ in een graadt

Engel: en Fran: mylen 20 in een graadt

Souslandt

Aveiro

Souslandt

L L I A .

Lagos

Ria de Montego

Pissaga

Bajamaro

St. Catharina

Baiarcos

C.de Montego



ſhall ſee alongſt the coaſt many towers and little houſes, Villa del Conde men ſhall ſee at ſea like a great Towne.

The River of Port a Port men may know by the rocks Leſons, they are very high, and lye a little to the northwardes of the River.

The Cape de Montego is a high poynt, and within it in the land are high mountains. The Cape is ſometimes taken to be the Rock, but is eaſie to be diſcerned from it, becauſe of the Burlings, which lye here to the ſ. wards, & to the n. wards of the rock.

The Cape de Montego lyeth from Avero ſ.ſ.w. diſtant 7 leagues: a league to the ſouthwards off it lyeth Paſſage, or the River of Montego, a broad haven. From the Cape de Montego runneth off a fowle ledge of Rocks, a good wayes from the ſhoare, which men muſt avoyd. Under the Cape men may ride for northerly winds in 7 or 8 fathom, a northnorthweſt wind commeth right from the poynt, for ſoutherly windes men may anchor to the ſ. wards off the river of Montego.

From the ſouth poynt of the river runneth off a ſand riffe when you ſayle in there, and that you come in out of the ſea, it ſheweth as if you might ſayle into the ſouthwardes of the riffe, but it is not to be done: you muſt ſayle into the northwards of it. Upon the north poynt ſtandeth the little village S. Chatarina, and a little to the northwards of it a Fiſher village, called Buarcos. Upon the north ſide within the havens-mouth ſtandeth a lime kilne, with a wood of Fig-trees, when you bring them one in the other, and then ſayle ſo right in with them, you runne in right in the channell, there is ſometimes no more then twelve or thirteene foot water at a halfe flood: you may not certainly truſt to the deſcription of this haven; for in regard it is there ſand-ground, it doth ſhift ſometimes with the great Freſhut that come of the River, and alſoo with ſtormes out of the ſea. From Cape de Montego to the Peniche, or Nova Liſbona, (at the Cabo del Fiſiron, which is the poynt within the Burlings) the courſe is ſouthweſt and by ſouth ten leagues, there lyeth of a rock from the poynt, to the ſouthwards of it is a great bay, where men may runne in behind it with barks, and lye landlockt. In that bay lyeth a little town againſt the high land called Artogie, a little to the ſouthwardes of the Cape del Fiſiron lieth a high round hommock, which the Dutchmen call young Roxent.

From the cape Montego to the Burlings, the courſe is ſ.w. 12 or 13 leagues. Behind the Burlings is a good roade & anchor ground, under the great Iſland before the Hirmitage, there you may anchor in ten fathom, you may come in there from the northwards or from the ſouthwardes, it is there broade and wyde, and every where cleane.

Of the Tydes and Courſes and Streames.

A ſouthweſt and northeaſt Moone maketh at all theſe places (on the ſea ſide) high water, and within in the havens a point or two later, according as they lye farre with the land.

As on all the coaſtes of Portugall, even ſo here alſoo on theſe coaſts a ſouthweſt & n. e. moone maketh the higheſt water.

A ſ. w. and n. e. Moon maketh on theſe coaſts full ſea, within the havens a poynt or two later, according as they lye far within the land.

Courſes and Diſtances.

From Camina to Viana ſ. ſ. e.	7 leagues.
From Viana to Villa del Conde ſ. & by e.	6 leagues.
From Villa del Conde to Port a Port ſouth and by eaſt	6 leagues.
From Port a Port to Avero ſouth	11 leagues.
From Avero to Cape de Montego ſ.ſ.w.	7 leagues.
From Port a Port to the Burlings ſ. ſ. w. and ſouth w. & by ſouth	31 leagues.
From Avero to the Burlings ſ.w.	20 leagues.
From Cape de Montego to Peniche, or Cape del Fiſiron ſ.w. & by ſ.	12 leagues.
From Cape de Montego to the Burlings ſouthweſt	13 leagues.

Heights.

Port a Port lyeth in	41 degrees. 5 min.
Avero in	40 degrees 30 min.
Cape de Montego lyeth in	40 degrees 14 min.

How theſe Lands doe ſhew themſelves at Sea.

S. Rego.



Thus ſheweth the coaſt of Portugal from Bayone to Cape de Montego, when you ſayle alongſt by it, about 4 leagues off, the figure following belongeth here to, at the croſſes one to the other.

Cape de Montago.



When that black Hommock where the H ſtandeth by, is eaſtſoutheaſt from you, then are you thwart off, or open before Avero.

The high Land of Viana.



Thus ſheweth the Land of Viana, and to the ſouthwards of it the Hommock by B is 2 leagues to the northwards of Villa del Conde.

The high Land of Viana.



The land by Viana, and to the ſouthwards of it towards Villa del Conde, ſheweth as is pourtrayed in this and the figure following, by V, is the Rivers mouth of Viana.

Ville del

C



Ville del Conde.

This followeth to the former figure, the Hommocks at C, is two leagues to the northwards of Villa del Conde.

The high land of Viana.

A



Thus ſheweth the foreſayd land of Viana, & to the ſouthwards of it, when Viana, (being by A) is northeaſt from you 10 leagues.

Mettelyne thwart from you.



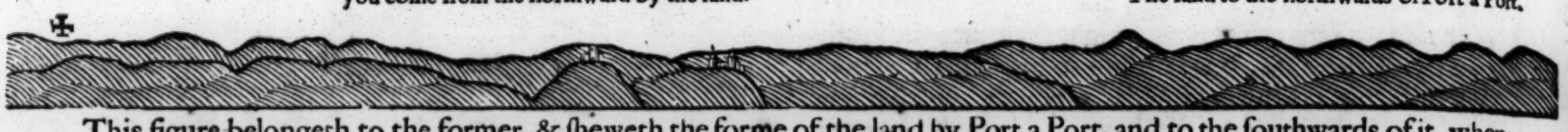
Rockes about a league to the north of Mettelyne.

Rocks off Mettelyne.

Thus ſheweth the land by Mettelyne, when Mettelyne is thwart from you and that you are cloſe by the land.

Caſtle on the north ſide of Port a Port, when you come from the northward by the land.

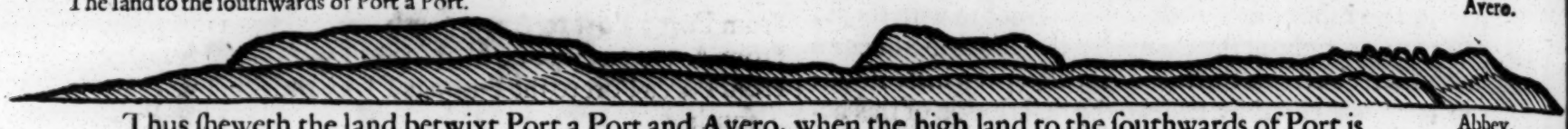
The land to the northwards of Port a Port.



This figure belongeth to the former, & ſheweth the forme of the land by Port a Port, and to the ſouthwards of it, when you come from the ſouthwards, you ſhall ſee a little village, within the caſtle of Port a Port, called S. Iohn. A league to the northwards of it lyeth Mettelyn.

The land to the ſouthwards of Port a Port.

Avero.



Abbey.

Thus ſheweth the land betwixt Port a Port and Avero, when the high land to the ſouthwards of Port is eaſt and by ſouth from you 4 leagues.



Thus ſheweth the land of Port, when you come from the ſouthwards.



Thus ſheweth the land of Port a Port, when it is eaſtſoutheaſt from you about 4 leagues.

Viana. Villa del Conde. Port a Port.



Thus ſheweth the land from the northwards of Viana to Port a Port, when you ſayle alongſt by it.

Port.



When Port a Port is ſoutheaſt from you ſeven or eight leagues, then it ſheweth with the land to the northwards of it in this forme.

The ſeventh Demonſtration,

In which

The Sea-Caoſts of Portugal, from Piſſage to S. Uves or Setubal are deciphered.

FRom the ſouth poynt of the River runneth off a ſand-riffe; when you ſayle in there and that you come in out of the ſea, it ſheweth as if you might ſayle into the ſouthwardes of that riffe, but it is not to be done: you muſt ſayle into the northwards of it. Upon the north poynt ſtandeth the little village S. Catharina, & a little to the northwards of it a Fiſher village, called Buarcos. Upon the north ſide within the havensmouth ſtandeth a lime kilne, with a wood off Fig-trees, when you bring them one in the other, & then ſayle ſo right in with them, you runne in right in the channell, there is ſometimes no more then twelve or thirteene foot water at a halfe flood: you may not certainly truſt to the deſcription of this haven; for in regard it is there ſand-ground, it doth ſhift ſometimes with the great Freſhuts that come off the River, and alſo with ſtormes out of the ſea.

gues.

PORTV

Het Zuydlyck[e] de[el]
van Piſsage t[o]t aen
S[t]ba[rt]

P O R T V

L I A.

Piſsage

Ittogye

Ionge Roxent

Peniche

Barlenges

Duytſche mylen 15 in een graadt

Spaanſche mylen 17½ in een graadt

Engel. en Fran. mylen 20 in een graadt

RTVGAEL
dlyck deel, Beginnende
Page tot aen S.Vues alias
Setubal.

G A L

Setubal ofte S.Vves
Slot van Palmella
Troia
Wit huys
t'Witte Slot
Les Bancques
Soulant
Houcheus
Conna
Palhais
Lisbona
Almada
Rio Dargan
Zizembre
Bobrn
Belem
S. Catrines Clooster
Rosberg
Cesaria
Zuyder cachops
Croke diep
Noorder cachops
S. Giglis
Symtra
Cascais
M. de Roxent
C. Roxent
Str. van hoogh.
C. de Spichel

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ſea. From Cape de Montego to Peniche, or Nova Liſbona, (at the Cabo del Fiſiron, which is the poynt within the Burlings) the courſe is ſouthweſt and by ſouth 12 leagues, there lyeth off a rock from the poynt, to the ſouthwards of it is a great bay, where men runne in behind it with barks, & lye landlockt. In that bay lyeth a little town againſt the high land called Artogie, a little to the ſouthwardes of the cape del Fiſiron lyeth a high round hommock, which the Dutchmen call young Roxent.

From the C. Montego to the Burlings, the courſe is ſ. w. twelve or thirteene leagues. Behind the Burlings is a good roade & anchor ground, under the great Iſland before the Hermitage, then you may anchor in ten fathom, you may come in there from the northwards or from the ſouthwards, it is there broade & wyde, and every where cleane.

From the Burlings to the Rock, or Roxent, the courſe is ſouth and by eaſt, & ſouthſoutheaſt ſixteen leagues, but from the Cape del Fiſiron (behind the Burlings) to the Rock, the coaſt lyeth ſouth & north fifteene or ſixteene leagues. The Rock or Roxent is a point of land, very eaſy to be knowne, although you be a great wayes off, yet you ſhall alwayes ſee the ſharpe hommock of the Abbey of Syntra.

Caſcalis. A great league to the eaſtwards of the poynt of Roxent, or the Rock, lyeth the road of Caſcalis, where men may lye land-lockt for a northweſt, north, & northeaſt winde, in 12 or 13 fathom, ſo deep or ſhoale as they will.

S. Gillians or S. Gilliens. A great league to the eaſtward of Caſcalis, lyeth the poynt of S. Julian, or S. Gillians, whereupon ſtandeth a ſtrong caſtle, that is the north poynt of the River of Liſbone, the norther channell of the River goeth in within a bowles caſt alongſt by it.

For to ſayle in at the norther channell. For to ſayle into the norther channell, you muſt run in, alongſt within the length off a maſt alongſt by the foreſayd point, but comming before the caſtle of S. Gillians, you muſt edge ſomewhat over towards the Carrick deepe, for to avoyd ſome fowle ground and rocks, which lye on the eaſt ſide of the Caſtle. Being paſt that a little, you may luffe up againe towardes the norther ſhoare and ſayle alongſt by it to Reſtiers, & ſoo forth even to Liſbone, men doe commonly anchor before the Village off Bolyn in twelve or thirteen fathom. Men muſt take heed not to come into this channell with calme weather, and with an ebbe, which falleth very ſtrong upon the norther Cachops: this channell of S. Gillians lyeth in eaſt and by ſouth; being within, you muſt ſayle up e. n. e. and n. e. & by eaſt, and when you come againſt the Abbey at Reſtier, then you muſt edge ſomewhat over towards the ſouth-land, els you muſt keepe the north-land alongſt.

For to ſayle in at the Carrick deepe. For to ſayle into the Carrick deep, you ſhall bring Caſcalis, over the weſt-poynt of Roxent, & keepe it ſo, untill that the little Tower (which you ſhall ſee ſtand above the Abbey at Reſtiers) come over the white Abbey which ſtandeth the fartheſt from Reſtier, to wit, over S. Katherines Abbey or Cloyſter, goe then north e. & n. e. & by n. in, keeping theſe marks ſtanding thus, untill that you come within the poynt off S. Gillies, and then goe in alongſt by the north-land to Reſtiers within the Caſtle, and anchor there where you thinke it beſt. Upon theſe markes you may ſayle in and out at the Carrick deepe. If you come from the weſtwardes and will goe in to the Carrick deepe, then bring Caſcalis over the weſt-end of Roxent, and ſayle ſo about the norther Cachops, untill that the Town off Liſbone come within two ſhips lengths neere to the ſouthſide of the River; & then further in north-eaſt and by north, when as then you ſhall ſee the ſand-bay within the poynt of S. Gillians, then are you in the right fareway.

But if it ſhould happen, that you could not ſee the towne, or the little Tower, then keep the ſand-bay (which lyeth within S. Gillians poynt north e. land by north from you and ſayle ſoo n. e. & n. e. & by north in, and take the ſounding of the norther Cachops in eight or nine fathom: when you begin to come againſt S. Gillians poynt, ſayle then indifferent cloſe along by the north-land, as is before ſayd.

He that will turne out or in to the Carrick deepe, muſt bring the foreſayd little tower that ſtandeth within the land, a ſhipps length to the ſouthwards, & a ſhipps length to the northwardes off the foreſayd Abbey or Cloyſter of S. Katherines, and then caſt about every time, and ſoo turne too and againe out and in.

Alſoo come not with calmes in this channell, (neither bound inwards nor outwards) with an ebbe, for it falleth very ſtrong over the eaſt end of the Cachops.

If you will run out at the Carrick deepe, you muſt looke out for the foreſayd little Tower: when it commeth out from under that high land, bring it then a little to the weſtwardes of the ſecond white Abbey or Cloyſter, and goe away ſouthweſt and by ſouth, and then the little tower ſhall come to the Cloyſter.

But if you muſt turne out too and again, then you muſt be very carefull of your tydes, for the ſtreames fall ſtrong over the Cachops, ſo that it is very dangerous with calmes to come in or out at thoſe channels, but eſpecially in ſayling out with an ebbe, for it falleth thwart over the Cachops.

From Roxent to S. Uves poynt, the courſe is ſoutheaſt & by ſ. 10 leagues, that is alſo a poynt eaſy to be-known, by a high round hill which lyeth on it, alſo men ſhall ſee the top of the caſtle of Siſembre upon a flat hill like a great top or ridge of a countrey houſe.

S. Uves poynt is called Cape de Pitcher, & by the Dutchmen Cape de Spichel, a little to the ſouthwards about the poynt, is a rent or clift in the land, before it is good riding in 9 and 10 fathom. Before Siſember men may alſo anchor in 15 or 16 fathom.

Of the Tydes and Courſes and Streames.

On theſe Coaſtes, as on the former, a ſouthweſt & northeaſt moone maketh high water.

A ſouthweſt and northeaſt moone maketh full ſea at the foreſayd places, on the ſea-coaſt, & within the havens a poynt later.

A northeaſt and ſouthweſt Moon maketh on theſe coaſts full ſea, like as on all the coaſtes lying on the great ſea, there goe alſo no ſtreames alongſt the land, becauſe (through the ſwelling off the Ocean ſea) the flood commeth right on againſt the coaſtes, and falleth right in and out at the Havens.

Courſes and Diſtances.

From Cape del Fiſiron, or Nova Liſbona, to the Rock, or Roxent ſouth — 15 or 16 leagues.
From the Burlings to the Rock, or Roxent, ſouth & by eaſt, and ſ. ſ. e. — 16 leagues.
From the Burlings to the Cape S. Vincent ſ. & by eaſt — 53 leagues.
From the Burlings to the great Canaries, ſouthſouthweſt — 248 leagues.
From the Burlings to the Iſland Palma ſouthweſt & by ſouth — 256 leagues.
From Roxent to the Cape Pither, or Saint Uves poynt ſoutheaſt and by ſouth — 10 leagues.
From Cape Pitcher to Cape S. Vincent ſouth ſomewhat eaſterly — 29 leagues.
From Roxent to Cape Saint Vincent ſouth and by eaſt — 37 leagues.
From Roxent, or the River of Liſbone, to the great Canaries ſouthſouthweſt weſterly — 240 leagues.

Heights.

The Burlings in — 39 degrees 40 minut.
Roxent lyeth in 38 degr. 55. min. or as ſome hold in 39 deg.
Cape Pitcher, or S. Uves point lieth in 39 degr. 30 minut.

How theſe Lands doe ſhew themſelves at Sea.

C. Montego.

The Land to the ſouthwards of Montego.



The C. de Montego being northeaſt from you foure or five leagues with the land to the ſouthwards of it, ſheweth it ſelfe as is pourtrayed in this and the figure following at the letters A A they belong one to the other.



This belongeth to the former, and is the land to the ſouthwards of Montego, untill thwart of the Burlings.



Thus ſheweth the Burlings when the northermoſt are eaſt from you a league.

The land betwixt Peniche and Roxent, ſheweth it ſelfe as is pourtrayed in theſe three figures following, when the high land to the ſouthwards of Peniche, being called young Roxent, is eaſt from you, the like letters, as A A and B B belong one to the other.

Young Roxent.





This belongeth to the former figure, and is the land to the northwards of the Rock, or Roxent.

Roxent.



This followeth the former figure, untill Roxent, or the rocke, at the B, one to the other.

Young Roxent northeaſt and by eaſt.

Roxent ſouth and by eaſt.



Thus ſheweth the Rock, or Roxent, when it is ſouth and by eaſt, and young Roxent is northeaſt and by eaſt from you, and that you are cloſe by the land.



When the Rock or Roxent is northeaſt from you ſeven leagues, it ariſeth thus.



When the Rock or Roxent is eaſt and by ſouth, and e.ſ.e. from you 7 leagues, it ſheweth it ſelfe thus.

The eight Demonſtration,

Which

Contayneth the deſcription of Algarve and Andaluzia, from S. Uves to Palos or Clif.

Road under S. Uves poynt.

FIve leagues to the eaſtwardes of Cape Pitcher, or Saint Uves poynt, lyeth Saint Uves, there lyeth a great bancke before the havens mouth. Beneath the high land upon the water ſide, ſtandeth a white Caſtle, when that is northnortheaſt from you, then are you right before the havens mouth.

For to ſayle in over the Banke before S. Uves.

If you will ſayle over the bancks into S. Uves comming off from C. Pitcher, or S. Uves poynt, then keepe the weſt poynt off Siſember a ſhips length without the eaſt poynt, and goe then eaſt, and eaſt and by north on, untill that the caſtle of Palmelo which ſtandeth above S. Uves, commeth in a valley over the foreſayd white Caſtle upon the water ſide. Sayle then northnortheaſt right in with them, untill you come within the Caſtle that ſtandeth upon the water-ſide, and then in along within a cables length by the north-land, northeaſt, and by eaſt untill you come before the Towne off Saint Uves, or Setuball. But when the Caſtle of Palmelo commeth under the land, that you cannot ſee the ſame any more, there ſtandeth alſoo a white houſe on the north-ſide of the Caſtle that ſtandeth



Setubal al:
S. Yves.

Slot van Palmelo

Wit huys

t'Witte Slot

Troia

Sout landt

Zizembre

Duytsche mylen 15 in een graadt

Spaansche mylen 17½ in een graadt

Engel. en Fran. mylen 20 in een graadt

Cust van

ANDALVZIA

En Algarve, Beginnende van Capo de Spichel tot aen het Clif.

Blauwe berch

REYNO D'

ALGARVE

Salines

Sibris

Villa nova

Vyge bergen

Lagos

Vyge bergen

C de S. Vincente

A N D A L V Z I A

S. Iuan del Puerto

Guelva

Wolves bfe

Mogner

Palos

Xarqa

Odier

Saluces

S. Miguel

Lepe

Taron

Aimonte

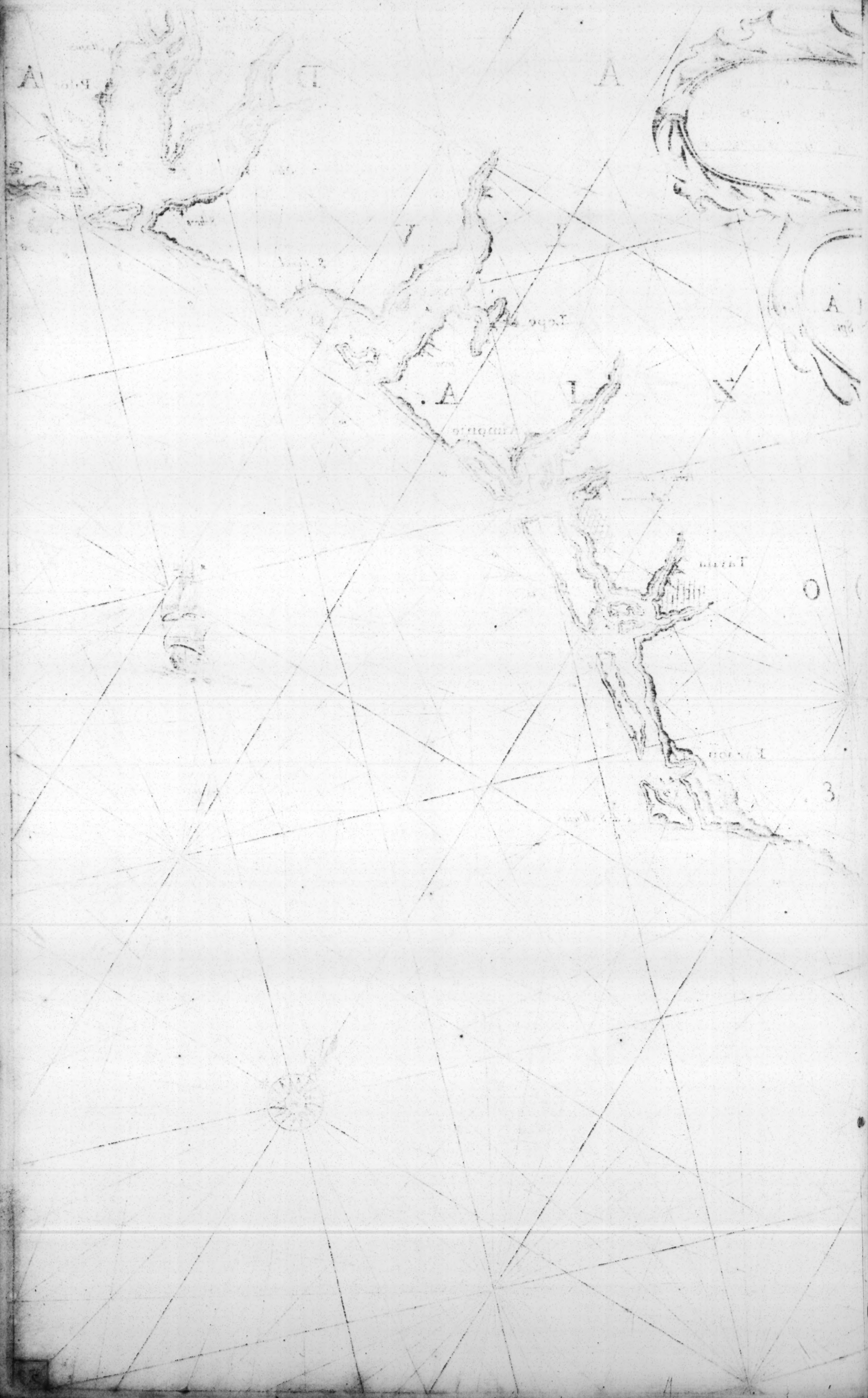
Porto S. Maria

Castromarin

Tavila

Faraon

C. de S. Maria



deth on the water ſide, keepe that then ſo ſtanding, and run in right with them, untill you come within the white Caſtle, and goe then in (as before is ſayd) alongſt by the north-land, untill you come before the Towne of Saint Uves, and anchor by the ſame Towne, before the Fiſher village, in ſix or ſeven fathom. Upon the bancke is at halfe flood three fathom & a halfe water, when you ſayle in over it, you ſhall finde at leaſt 7 divers ſhoals. There goeth in alſo a channell alongſt by the ſouth-land, but that is onely for barkes: betwixt the ſouther channell and the right deep lye the banckes at ſome places ſo ſhoale, that they lye allmoſt above water.

For to finde the deepeſt water in ſayling out over the banck off Saint Uves, with ſhippes that draw much water, doe thus: when you ſayle out from the white Caſtle, then bring the foreſayd white houſe over the north-ſide of the Caſtle, that ſtandeth on the water-ſide, ſo that you may ſee directly through betwixt them, and keepe them ſo ſtanding, untill Saint Uves poynt begin to come without the eaſt-poynt of Siſember, then bring the white houſe to the ſouth-ſide of the Caſtle, and run ſo out, you ſhall have there the deepeſt water. But when you can ſee that Caſtle of Pelmelo, that is a direct longſt mark for to run over the bancke: And then that white Caſtle muſt bee from you n. northeaſt northerly.

It is from Saint Uves poynt to C. de Saint Vincent ſouth ſomewhat eaſterly 29 leagues, betwixt both are no knowne havens. Salines a little river lying halfe wayes, is alſo unknown. Salines.

From S. Uves to Cape S. Vincent, the coaſt lyeth moſt ſouth and by weſt about 32 leagues, betwixt both lye ſome high ſteep hils, which men doe call the Salines, which are very good marks for to know this coaſt by, but above all ſerve for the knowledge of this coaſt of Algarve, or of the Cape de Saint Vincent, the Vighebergen, or Mount Chigo, which lye within Lagos & may be ſeen farre off at ſea. A halfe league to the northwardes of C. S. Vincent lyeth a high cliffe in the land, that is ſomewhat whitiſh, & higher then the other land; when you ſee that, then you are by the Cape de S. Vincent. Upon the poynt of the Cape ſtandeth a broken Abbey or Cloyſter, and cloſe by the poynt lyeth a high rock, being called by the Dutch ſaylers Monninck ſtrand.

A little about the poynt of the Cape S. Vincent men may anchor in a ſand-bay, for a n. & n. w. wind in twenty fathom.

Road under Cape S. Vincent. About the ſecond poynt, to the eaſtwardes off the Cape, is another Sand-bay, there is a good road for a northweſt & northwinde in 14 or 15 fathom. From the Cape de S. Vincent to Cape Saint Maries, or Faro, it is eaſt or a little more ſoutherly ninteene or twentie leagues: betwixt them both lye Lagos, or Laves, and Villa Nova. From Cape S. Vincent to Lagos, it is eaſt and by north ſix leagues, there is a tyde-haven through betwixt the rockes, behind a ſtrand of chindle, which falleth dry at low water, men may alſoo ride there for a northweſt, weſtnorthweſt, and north wind, in ten or twelve fathom.

Villa Nova. Villa Nova lyeth about foure leagues to the eaſtwards of Lagos; betwixt both, 3 leagues from Lagos, and one from Villa Nova, lyeth a ſuncken rock, where off men muſt take heed. Villa Nova, is a good haven, it lyeth in north, and north and by weſt, at halfe flood you ſhall have there two fathom water, within in the haven on the eaſt ſide lyeth a little Iſland or rock, and upon it ſtandeth a Tower or little houſe, alſo there ſtands upon the land a great maſt with a barrell upon the top of it: when the little Tower, or little houſe, & the maſt come one in the other, then you muſt ſayle right in with them into the haven, alongſt by the eaſt-land untill you be paſt the little Tower, the weſt ſide is flat and ſhoale, when as you come by the maſt, then you muſt goe up to the weſtwardes before the Towne of Villa Nova, there you may anchor in foure or five fathom.

Faro. From Villa Nova to Faro, or cape de S. Maria, it is about 9 leagues. Upon the ſtrand ſtandeth a fire-tower and from the poynt ſhooteth of a riffe which men muſt avoyd; into the haven off Faro men muſt goe in from the eaſtwards, it lyeth weſt, and weſtnorthweſt in, and they muſt leave the tower on the larboard ſide, and run in two or three fathom: being within, they may anchor over againſt the Towne of Faro under the Iſland in three fathom, it is upon the barre at halfe flood 2 fathom deepe.

The Cape S. Maries ſheweth it ſelfe at ſea (when you firſt ſee it) in one round hommock, which is a good mark for to know the whole coaſt of the Condado by.

Five leagues northeaſt and by eaſt from Cape S. Maria or Faro lyeth Tavila, that is a crooked ſhoaly Barre, which allmoſt every yeare doth ſhift, and is not to truſt to for to ſayle into it, unleſſe it were firſt beakond, or ſet with buyes, it is at halfe flood ſcarce two fathom deepe, men lye there a little within the ſand-hills in foure fathom.

From Tavilla to Ayemont, the courſe is eaſtnortheaſt 5 leagues.

Ayemont is a deepe Barre, and one of the beſt havens in the whole Condaet, it lyeth in northweſt by the eaſt-land, at halfe flood it is three fathom deepe, there lyeth ſome ſhoals before the havens, the markes there of are theſe: There ſtandeth a tree upon the eaſt ſide of the haven or rivers-mouth, when Ayemonte commeth right againſt over the tree, then are you to the eaſtwards off the ſhoals or ſands, which lye before the haven, then you muſt goe towards the foot ſtrand, and leade it in alongſt by it northweſt, and northweſt and by weſt, when you are within, you muſt goe up to the northwards before the Town, or if you will goe before Porte Maria, the northweſt courſe will bring you there; within, it is wide and broad, and ſixe or ſeven fathom deepe.

There goeth in alſoo a haven by the weſt-land, where men come in, right out of the ſea, but that by the e. land is the beſt.

From Ayemont to Leepe, or S. Michaels, the courſe is eaſt and by north ſeven leagues. Leepe hath uncertain bars which oftentimes ſhift, where men may not truſt themſelves to ſayle into without a Pilot, the Barre that goeth into the eaſtwardes of the great Iſland, is held to be the beſt; from thence they muſt goe up to the weſtwardes towards Taron, & the River, & ſo come to Leepe, and there they take their lading in before the deepe. Leepe.

The Barre of S. Michaels was wont to run thwart over into ſea and to be at halfe flood three fathom deepe, & before S. Michaels five fathom: from thence men may com through within over the ſhoals at high water into the River at Leepe. Alſo men were wont to come in by Taron; but for certainty it is needful to take in a Pilot for theſe Barres. Saint Michaels. Taron.

From S. Michaels to Palos, or Saltees, the courſe is eaſt & eaſt and by ſouth 7 leagues, here men ſayle into the great Condaet, this haven goeth in at the weſt end of the Rooduyn, there ſtandeth a great broad tree to the weſtwards off that white cliffe, that you muſt keepe over a red ſand-hill, like as if it were red earth: this ſand-hill goeth ſloping downe: Runne in upon theſe markes unto the ſtrand, about north & north and by weſt, then ſhall the Tower Odier which ſtands above Wolves, come over the eaſtſide of the havens mouth, keepe them ſo ſtanding, and ſayle alongſt by the ſtrand, without 2 cables lengths untill you come about the poynt, and then you run up north to Palos or northweſt to Wolves, and anchor there in ſixe or ſeven fathom. Palos. Saltees. Wolves.

It is deepe there within, ſixe, ſeven, and alſo three & foure fathom in ſayling up according as men doe ſayle farre up, or els not, this Barr is upon the ſhoaleſt at halfe flood three fathom and a halfe, but within it is five fathom deep.

There commeth alſo a channell running out of the ſea betwixt the ſands, then Wolves commeth to the eaſt-ſide of the havens mouth, and men ſayle n. n. w. in; when

they are within the havens mouth, then they muſt doe as before is ſayd. This channell is three fathom deepe.

For knowledge of the land hereabouts you ſhall underſtand that at the weſt end of the Roduyn, lyeth a white ſteepe land, cliffy, being reddiſh erath or chalke: he that falleth there with, may think that he is by the havens mouth of Saltees, upon it ſtand ſome little buſhes of trees, els the land is all without trees, reddiſh ſand, therefore called Roduyn, or Red ſandhill.

Of the Tydes and Courſes and Streames.

A ſouthweſt and northeaſt Moone maketh at all theſe places (on the ſea ſide) high water, and within in the havens a poynt or 2 later, according as they lye farre within the land.

As on all the coaſtes of Portugall, even ſo here alſo on theſe coaſts a ſouthweſt & northeaſt Moone maketh the higheſt water.

A ſ. w. & n. e. Moon maketh on theſe coaſts full ſea, within the havens a poynt or two later, according as they lye farre within the land.

An e. & ſ. w. Moone maketh high water at the C. S. Vincent, & at the Cape S. Maria, alſo on the coaſts lying betwixt them both.

But to the eaſtwardes on the Condaet maketh full ſea a ſ. w. and by ſ. & ſ. ſ. w. Moone.

Courſes and Diſtances.

From C. Pitcher to the C. S. Vincent ſomewhat eaſterly 29 leagues.
From the river of Liſbona to the Iſle de Salvages ſouthweſt and by ſouth 213 leagues.
From the River of Liſbona to Porto Santo ſouthweſt 160 leagues.
From the River of Liſbona to the Iſle Madera ſouth w 270 leagues.
From the River of Liſbona to the Iſland Tercera weſt 263 leagues.
From de C.S. Vincent to Lagos, or Laves eaſt & by north 6 leagues.
From Lagos to Villa Nova e. 3 leagues.
From Villa Nova to C. Maria, or Faro, eaſt & by ſouth 10 leagues.
From C. S. Maries, or Faro, to Tavilo, n. e. and by e. 5 leagues.
From Tavila to Ayemonte e. n. e. 5 leagues.
From C. S. Vincent to C. S. Maria eaſt. 19 leagues.
From C. S. Maries to Leepe, or S. Michaels e. n. eaſt 17 leagues.
From C. S. Maries to Saltees e. n. e. 24 leagues.
From C. S. Vincent to the C. Cantin ſ. 90 leagues.
From C. Vincent to C. de Geer ſouth weſterly at leaſt 138 leagues.
From C. S. Vincent to the Iſland Lanzerotte ſ. ſ. weſt 180 leagues.
From C. S. Vincent to the great Canaries, ſouthweſt and by ſouth 210 leagues.
From C. S. Vincent to the Iſle de Palma ſouthweſt 124 leagues.
From C. S. Vincent to Porto Santo ſouthweſt and by weſt 144 leagues.
And to Madero ſ. w. & by w. 157 leagues.
From C.S. Vincent to the Iſle de S. Maria w. 236 leagues.
From C. S. Maria to Sipiona e. 29 leagues.
From C. S. Maria to the Straite e. ſouth e. and ſoutheaſt and by eaſt 42 leagues.
From C. S. Maria to C. Cantin ſ. & by w. 90 leagues.
From C. S. Maria to the great Canaries ſouthweſt and ſouthweſt and by ſouth 220 leagues.
From C. S. Maria, or Faro, to the Iſle de Madera ſ. w. and by weſt 174 leagues.

Heights.

The Cape de S. Vincent and S. Maria lye in 37 degrees.

How theſe Lands doe ſhew themſelves at Sea.



Roxent. Caſcalis.

The land to the eaſtwards or to the ſouthwards of Roxent towards Reſtiers, ſheweth it ſelfe as ſtandeth pourtrayed in this and the figure following.



S. Gillis.

This belongeth to the former.

Cape Pitcher.



Thus ſheweth the Coaſt betwixt the River of Liſbona, and S. Uves poynt, called C. Pitcher.

Thus ſheweth S. Uves poynt when you come from the northwards.



Thus ſheweth S. Uves poynt when it lyeth eaſt and by north 6 leagues from you.



Thus ſheweth S. Uves poynt when it is northeaſt and by north foure or five leagues from you.



In this forme ariſeth S. Uves poynt, when it is northnortheaſt five or ſixe leagues from you.

Blew

Out Mamora
Larache
Hoge boom
Wit Clif
Arzila
Heuvelken
C. Spartel
Tanger
Out Cassoel
C. Malabata
Alcasar Segeer
Schuminkel berch
Castellon
Tetuan
Tibosses
C. Razedinef
C. Spartel
C. Tetuan
Rif
Tanga
Netgalli
Cabasa
Penon de Velez
B A R B A R I Æ
P A R S.
De Straat van Gibraltar
Gibraltar

Punta d. S. Sebastiano

Roodhyn

Sibiona

Casteel

Rivier

S. Lucar de Barrameda

Rotta

Soutlant

Sivilien

T. de S. Pedro

Les pierres

Diamant

Colommen van Hercules

Isola de Cadiz

Puente de Suaco

Soutlant

Puerto S. Maria

S. Catrine Capel

Horzado

Fuerte Real

Xeres

Soutlant

Out Gibralter

Ballast places

Comil

C. Trafalgar

H I S P A N I Æ

L U S I A N D A :

Duytsche mylen 15 in een graadt

Spaansche mylen 17½ in een graadt

Engel. en Fran. mylen 20 in een graadt

Cust van

HISPANGIEN

Vande Rivier van Sivilien tot aen Malaga

ende

De cust van Barbarien van Out Ma: mora tot Penon de Velez.

Estepona

Marbolla

Rangerola

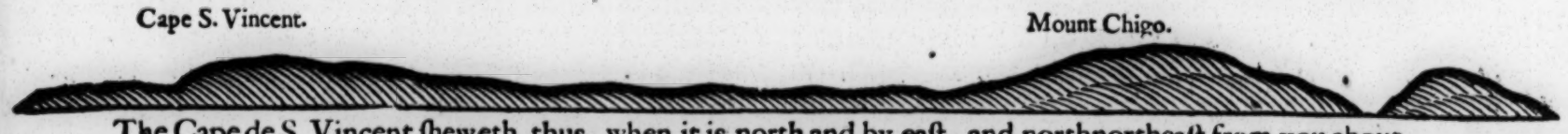
C. de Malaga

Malaga

P A R S.



Thus ſheweth the land about the C. de S. Vincent, when you come from the northwards, and ſayle alongſt by it.



The Cape de S. Vincent ſheweth thus, when it is north and by eaſt, and northnortheaſt from you about 8 leagues. The Vigebergh or Mount Chigo lyeth then northeaſt and by north from you, in forme as is here pourtrayed.



When the Vigebergen, or Mount Chigo is northnortheaſt and northeaſt and by north from you 12 or 13 leagues, it ſheweth thus, in one long hill, going downe flat at both ends, with another peece of land, much lower to the eaſtwards of it.



Thus ſheweth the Cape S. Vincent, when it lyeth northweſt ſeven leagues from you.



Thus ſheweth the Vigebergh, or Mount Chigo, when it is with cleare water northnorthweſt from you 11 or 12 leagues.



Thus ſheweth it ſelfe the land about Lagos and Villa Nova, when you are thwart from Villa Nova, not farre from land, a little to the weſtwards of Lagos, lyeth a white poynt, where by men may eaſily know Lagos. The Cape S. Maria ſheweth it ſelfe then, as in the figure following.



Thus followeth the former figure from Albofero to the Cape S. Maria.



Thus Sheweth Cape S. Maria when it is northeaſt and by eaſt from you nine or ten leagues.



When the Cape S. Maria is northeaſt and by north from you, it ſheweth it ſelfe thus.

The ninth Demonſtration,

In Which

Are ſhewed the Sea-Coaſtes of Andaluſia from Palos untill you are paſt the Straights by Madril, and the Coaſt of Barbarie lying over againſt it, and alſo the Cape Spartell on the Coaſt of Barbarie to the Old Mamora.

For to ſaile into the River of Saint Lucas.

FRom Saltees to the river of S. Lucas, the courſe is ſoutheaſt & ſoutheaſt and by eaſt betwixt 8 & 9 leagues.

If you will ſayle into the river of S. Lucas, then ſayle alongſt the red ſand-hils, ſo long untill that you get the towne of S. Lucas in ſight about e.ſ. e. from you, there lyeth a white cloyſter to the eaſtwards of the town, againſt the high land, and there ſtandeth a great tree

upon the high land, bring the tree even to the northſide or the Cloyſter, ſo that you may allmoſt ſee through betwixt them but not over the Cloyſter, keepe them ſo ſtanding, and ſayle right in with them, and ſo you ſhal not come to neer the rocks to take hurt of them, & you ſhal have upon the ſhoaleſt at low water & neepe tydes, 3 fathom, & at high water 22 foot, or ſcarce 4 fathom. When the Caſtle of Chipiona and the Church beginne to come one in the other, then you come to the firſt rocks or ſhoals, when the Church and Caſtle are right one over the other, then they ſtand ſouthſouthweſt from you, then you are upon the ſhoaleſt of all, but when the Caſtle with the Church come againe one through the other, then you get againe deeper water, 3 fathom and a halfe, and 4 fathom at low water with a neepe tyde, ſayle in alongſt upon the foreſayd markes of the cloyſter and the tree, but take good heed that you bring not the tree over the Quire, at the ſouth-end off the cloyſter, for you ſhould then come very cloſe to the rockes, rather bring the tree a little to the northwards of the cloyſter, for you can not lightly take hurt of the red ſand-hils, but you may borrow off them upon your lead in 3, and 4 fathom. There ſtands alſo a mill to the eaſtwards of the towne, take heed that you bring not that alſo over the round Cloyſter that ſtandeth a little to the eaſtward beneath at the towne, but keep them a handſpikes length aſunder, and then you ſayl in the beſt deep. But if the foreſayd mill, and that round Cloyſter come one in the other when you ſayle in, then you ſhall (without ſayle) come upon the rocks or ſhoals. When you are within over the ſhoaleſt, ſayl then towards the ſtrand of S. Lucas, untill that you ſee altogether open into the river, for to avoyd the riffe that ſhooteth off from the n. w. poynt of the river, ſayle on alongſt by the ſhoare and anchor before the little Church with the croſſes (which ſtands below in the ſand hills) in 5, 6, or 10, or 12 fathom, ſo neere as you pleaſe. Men may alſo turn out at this ſame channell with indifferent ſhips or barks, but they muſt take good heed, it is not there very broad.

For to ſayle alongſt by Sipiona.

There goeth in alſo a channell by the land of Sipionen or Chipiona, for to find it, you ſhall ſayle in within two cables lengths neer by the foreſayd land, untill that you be within the ſecond ſhoale, then you muſt edge ſomewhat off from the land, untill you come upon the foreſayd marks off the Cloyſter and the great tree, then you muſt run in alongſt upon them, as is before taught. The river of S. Lucas is eaſy to know, by the Rooduyn, or red ſand-hills which lye to the weſtwards of it.

Cales.

From Sipione to Cales Males, the courſe is ſ. e. 9 leag. Cales is knowne by the mountaine off Granade, when that is eaſtnortheaſt and eaſt and by north from you, ſayle then right in with it, and you ſhal not ſayle to fall right before Cales. At the poynt off Sipona lye many rocks above water, and betwixt the poynt of Sipiona Cales. Foure leagues from Sipiona lyeth Rotta, there ſhooteth off a great ledge of rocks from the poynt.

For to ſayle into the bay off Cales.

Hee that will goe into the bay of Cales, let him run in right with the rockes which lye on the weſt-ſide of the Bay, being called los Puercos, and within two cables lenghts in all alongſt by them in 6 or 7 fathom, untill he come before the town of Cales, and anchor there ſo deep as he pleaſeth, in 8, 10, 12, or 15 fathom, the faireway lyeth in moſt eaſtſoutheaſt and ſoutheaſt and by eaſt.

Los Puercos.

Diamant

There lyeth a rock under water, called the Diamant, about n. n. e. and n. e. and by north from the Puercos, a great half league. When S. Katharins chappell upon the northland is e. n. e. from you, then are you thwart of that rocke, there is at halfe flood 3 fathom water upon it, the

Marks of the Diamant.

marks off this rock are theſe: When Mary Church commeth over the north end of Cales, (that is a Cloyſter which ſtandeth without Cales) there ſtands alſo a houſe upon the hill, where men goe alongſt by, when they goe to Sheres, when that houſe commeth over the chappell which ſtandeth upon the water ſide: to the weſtwards of porte Marie: when theſe markes come together one in the other, then you ſhould ſayle upon the foreſayd rock, there is upon the ſhoaleſt of it at high water, 3 fathom and a halfe water upon it. But ſet the two high hills which are to the ſouthwards of the way of Sheres, that they bee a little aſunder, & that they doe not come one in the other, then you cannot ſayl upon this rock. The Puercos rock lye from the north-poynt off Cales about halfe a league. He that lies before Cales in the road, hath Puntall ſouth from him, or there abouts, according as he lyeth neer to Cales. But to the ſouthwards of Cales lyeth a rock, come not neerer that then in ſeven fathom.

The Bay of Cales is wyde and broad, men lye there in 5 & 6 fathom, the northweſt wind commeth there open in. If any man therefore would goe further in behind Puntall, let him goe in ſoutheaſt betwixt the poynt of Port Real & Puntall, and run up about the poynt of Puntall, there men lye land-lockt for all windes: there men may lay theyr ſhips dry a ground for to make cleane. He that will goe into the Creek, muſt take a Pilot, and run up into the water of Port Real leaving the little Iſland on the larboard ſide, and then Herods Creeck ſhall open it ſelfe, and there hee muſt ſayle up keeping the middle of the channell, till he come before the Saltheaps.

To ſayl from Cales to the Strait.

For to ſayl from Cales to the Strait, men muſt goe away ſouth, and ſouth and by eaſt to the C. de Trafalgar and then they ſhall run far enough without the bancke or rocks which lye off ſ. eaſt from Cales. From the point of S. Sebaſtian to Cape de Trafalgar, which is the n. poynt of the Strait, on the weſt ſide it is ſ. ſ. eaſt, ten leagues. About two leagues to the northwards of the Cape, lyeth Conil, there is a faire ſand-bay, where men may anchor in 12, 13, and 14 fathom clean ground.

Hee that deſireth to ſayle into the Straite of Gibralter comming from Cales, let him goe from the poynt of S. Sebaſtian, which is the weſtermoſt poynt of the Iſland Cales, ſouth & by eaſt, ſouthſoutheaſt, towards the Cape de Trafalgar, untill he be a good wayes without the land for to avoyd the Spaniſh coaſt which is fowle: there lyeth of weſt & by ſouth from the Iſland Tariffe, a banck of

Riffe of Tariffe.

ſtones 2 leagues, or two leagues and a halfe into ſea, where upon is eight, nine, or ten foote water, when it bloweth hard, men may ſee it break. The foreſayd poynt of S. Sebaſtians, and the C. de Trafalgar lye ten leagues aſunder.

When you are then ſomewhat without the Cape de Trafalgar, and ſet your courſe ſ.ſ.e. and ſ.e. and by ſouth, then you ſhall fall with the land off the Barbary coaſt, within the Cape de Spartell, about thwart off Tanger, lying in a great bight and ſand-bay. Upon the weſt poynt of this bay of Tanger, ſtandeth a Caſtle ſomewhat high, and yet ſomewhat higher upon the high land, ſtandeth a little watch-tower: but to the eaſtwards of Tanger ſtandeth alſoo an old ruinous watch-tower, whereby Tanger is very eaſy to be knowne. From Tanger to Ape-hill, the coaſt lyeth moſt e. n. e. and eaſt & by north, is the right courſe for to ſayle through the Strait. If you will ſail into the Strait by night, then keepe to the Barbary coaſt, which is very cleane and there you can take no hurt: but the Spaniſh coaſt is fowle, as is before ſayd. They that will ſayle alongſt by the Spaniſh coaſt, they muſt goe cloſe alongſt by the ſhoare, and runne through betwixt the Iſland Tariffe and the foreſayd fowle grounds, cloſe alongſt by the Iſland, or els muſt keepe farre off from the Iſland, for to runne alongſt without the ſhoals; but in the middeſt, neere a like unto both lands it is beſt.

Tanger.

Cape Cabrita.

Three leagues to the eaſtwardes of the Iſland Tariffe lyeth the poynt off Cabrita, being the weſt poynt of the great Bay of Gibralter over aginſt the hill of Gibralter: a little to the w. wards of it, is a good road for a n.e. wind, in 12, 10 & 8 fathom, not farre from the ſhoare, thwart off a great rock, which lieth cloſe upon the water ſide, a little to the eaſtwards of the fire-tower: A little to the weſtwards of that fire-tower which ſtandeth upon the foreſayd poynt, is a fair ſandſtrand, betwixt the two towers there you ſhall lye ſmooth for the weſtern grown ſea.

At Gibraltar is a faire Bay almoſt like a haven: if you will

will anchor in the bay of Gibraltar, then ſaile ſo farre into it, untill that innermoſt point of the hill of Gibraltar, doe ſtand eaſt from you, thereabouts it is deepe 5 or 6 fathom, and clean ground: towards the mill it is ſhoal water of 3 fathom. Men lye there in the Bay landlockt for a w. wind, a ſ. winde commeth from the poynt of Gibraltar hill, but a ſouthweſt wind that bloweth there open in. From thence are brought good wines.

When you will ſet ſaile from the road of Gibraltar with an eaſterly wind, it is good to beare up ſomewhat before the wind towards the weſt ſhoare, & then forth out alongſt by the lee ſhoare, for the eaſterly winds do fall with ſuch whirling & fore-flaughes from over the high land of Gibraltar, that you ſhall be hardly able to get out of the Bay alongſt by the high land. When you come from the eaſtwards, & will ſayle out through the Straits, and that you are ſomwhat neere to the Spaniſh coaſt, then you muſt be very carefull, for that you bring the hill of Gibraltar, againſt the high land of Barbary, and in regard the land to the northwards of Gibraltarhil is low, it ſeemeth (to loock to) to be nothing els, then as if there were the opening of the Straites. It hath here tofore happened, that ſome which have ſo miſtaken it, have ſayled into the bay, thinking it to be the opening of the Strait, & ſo have loſt their ſhips there. Therefore it is very needfull that men take great care not to miſtake themſelves of the hill of Gibraltar, & if men do take heed of it, it is eaſy to bee knowne.

Eſtepona lieth 5 leagues to the eaſtwards or to the northwards of Gibraltar, betwixt them both ſtand divers firetowers upon the coaſt, there is clean ground for to anchor. If you will anchor to the eaſtwardes of Gibraltar, by the next tower of Gibraltar, then bring Gibraltar ſouth-ſouthweſt from you, and anchor in 25 fathom, there is cleane ground & blackſand, but if you will anchor by the ſecond firetower, there is a valley, & there you may fetch water, and anchor in 20 or 22 fathom, there is a valley, and there is alſo clean ground, and better lying for to ſet ſail with eaſterly winds, for thoſe that are bound out of the Strait. Before Eſtepona, men may anchor in 14 fathom, that is a place for to lade fruite and wines; 5 or 6 leagues to the eaſtwards of it lieth Marveles, betwixt them both ſtand 5 watch towers upon the coaſt.

From Gibraltar to Marveles the courſe is n. e. and by north diſtant 12 leagues, if you will anchor at Marveles, then you muſt look out for two Packhouſes which ſtand upon the ſtrand & a great ſquare watch-tower cloſe to the eaſtwardes off the foreſayd Pack-houſes: bring the gate of the towne ſo, that you may ſee through betwixt the Packhouſes and the watch-tower, and anchor there in nine or ten fathom. Right before Marveles, the ground is not cleane. About a ſhot of a Caſt peece to the weſtwards of the town, men may fetch freſh water.

From Marveles to Fangerola it is 5 leagues eaſtnorth-eaſt, betwixt them both ſtand alſo 5 watch-towers. Fangerola is a caſtle, and hath a faire ſand-bay, there is good anchor ground in 7, or 8 fathom, a flat riſing ground, men may lye there landlockt for a weſtſouthweſt wind. Fangerola.

From Fangerola to C. de Mol, the weſt poynt of Mallaga, the courſe is forth eaſtnortheaſt two great leagues: but from the weſt poynt of Mallaga to the town of Mallaga, the courſe is northeaſt and northeaſt & by eaſt 4 leagues, it is there betwixt them both a faire ſtrand, where men may anchor all alongſt in 10 or 12 fathom. C. de Mol.

Mallaga is knowne by theſe markes: There ſtandeth a Caſtle to the eaſtwards upon the high land, & there come two walles downewards towards the ſea to another Caſtle which lyeth by the water-ſide. Before that ſame Caſtle is now the road, that which was wont to be the right road, is now altogether ſpoyled by caſting of ballaſt. Mallaga.

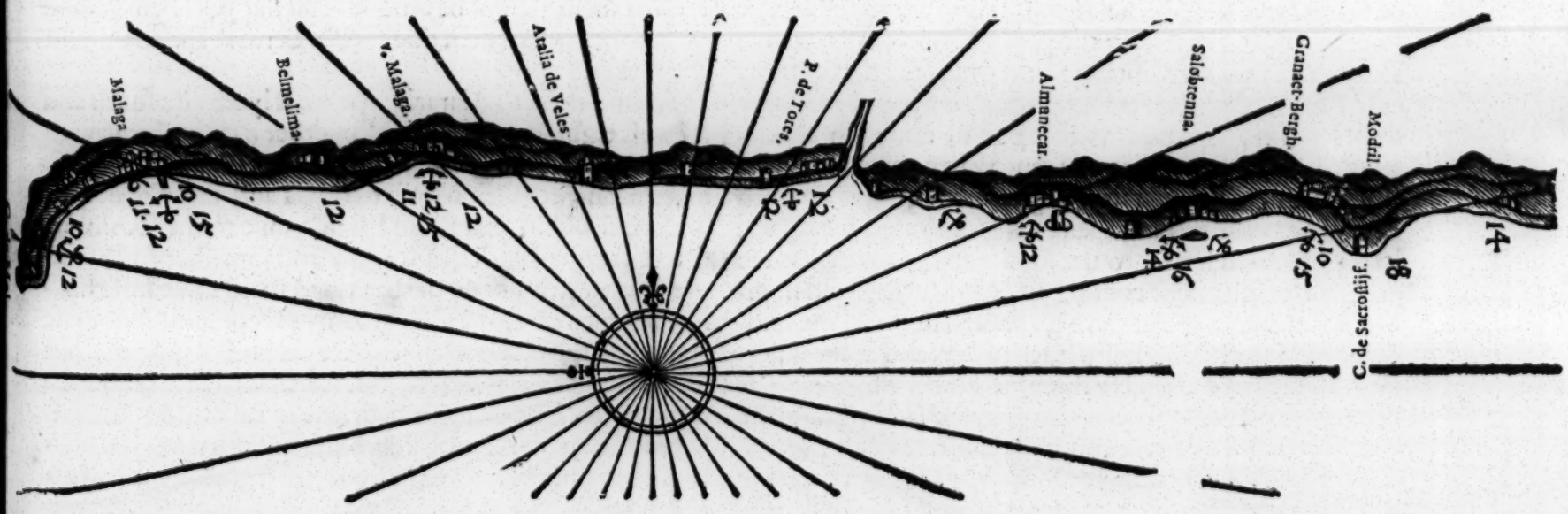
If you will anchor in the road before Mallaga, then anchor in 10, 11, 12, or 14 fathom, thwart off from the head, if that the head come to lye from you north and by eaſt, there is very good ground, the anchors hold there well, alſo men lye there out of danger for the Moores.

Velez Mallaga lieth from Mallaga eaſt and by north diſtant 7 leagues, betwixt them both men may anchor all alongſt by the ſhoare. About a league to the weſtwards of Velez Mallaga ſtandeth a little Caſtle; before it is good anchoring in 10 or 12 fathom. By the next Tower, to wit, the next to the little caſtle, there is freſh water to be gotten on the land.

The Towne off Velez Mallaga lyeth about a league within the land, but upon the ſtrand ſtandeth a great Packhouſe appearing like a caſtle. Velez Malaga.

If you will anchor at Velez Mallaga comming from the weſtwards, then you muſt give the weſt poynt a birth; there lyeth off a bancke a good wayes into ſea by the watch-tower which ſtandeth below, to the weſtwards of Velez Mallaga: But if you run alongſt by the ſhoare in tenne, or eleven, fathom, without

The Coaſt of Spain from Malaga to Modril.



comming

comming neerer the ſhoare, then you can not take any hurt in the foreſayd banke or riffe. When as the towne of Velez Mallaga commeth a little to the eaſtwards of the foreſayd Packhouſe or tower, which ſtandeth upon the ſtrand, then anchor in 12, 10 or 8 fathom, it is there all cleare & cleane ground.

From Velez Mallaga to Almunecar, the courſe is eaſt, 15 or 16 leagues, betwixt them both it is all cleane Coaſt, men may anchor there under all the poynts which lye betwixt them both.

Two great leagues to the weſtwards of Almunecar lyeth a poynt, whereupon ſtandeth a fire-tower, under is a good road for a weſt wind.

If you will anchor at Almunecar, then anchor to the weſtwards of the rock, where the little chappell ſtandeth upon the twelve fathom, there is good ground, and ſhall lye there landlockt for an eaſt & weſtnorthweſt wind.

Salobrena lyeth from Almunecar foure leagues to the eaſtwards, that is a little Towne with a little Caſtle, and lieht upon a hill a little about the eaſt poynt of Almunecar, & right before Salobrena lieth a little Iſland, he that will anchor there muſt anchor to the weſtwards of it, there he ſhall lye landlockt for a northeaſt wind, and alſo for a weſt wind, then he ſhall have ſuccour of the eaſt poynt of Almunecar. Men may alſo well anchor to the eaſtwards of that little Iſland, but to the weſtwards of it is the beſt road, there lye alſo all the ſhips, they may anchor there in fourteene and fifteene fathom, clean ſoft ground, in ſixteene fathom they ſhall lye ſomewhat too farre out. Men may (if need ſo require) run through betwixt the foreſayd little Iſland, & the maine land, betwixt them both there is about ſixteen or ſeventeen foot water, and the little Iſland is round about clean, ſo that men may run very cloſe alongſt by it without feare.

Two great leagues eaſtwards from Salobrena in the ſame bight, a half league from the ſea ſide within the land lyeth Modrill, which hath two Churches & ſome trees, thereabouts upon the water ſide ſtandeth a ſquare tower.

If you will anchor at Modrill, then anchor before the foreſayd ſquare tower, which ſtandeth upon the water ſide in twelve or thirteene fathom, ſo that you may ſee the little Tower upon the eaſt poynt even without the other poynt, there is cleane ground, men lye there landlockt for an eaſtwind, but a ſoutheaſt & a ſouthwind make there (like as at all places on theſe coaſts) a lee ſhoare. A little to the eaſtwards of Modrill lyeth the poynt, called Cape de Sacraſtijf.

The Coaſtes of Barbary.

For to ſayle out of the Bay of Gibralter to Tetuan, then run over ſouth and by eaſt, about cloſe by the poynt of Seuta, eſpecially with a weſterly winde, you ſhould otherwiſe be carried away ſo with the current, which then commonly runs to the eaſtwards, that you ſhould fall too farre to the Leewards. Comming then about by the point of Seuta, you ſhall ſee out a head a black point called cape Porkes, lying ſouth from the poynt of Seuta. When men lye in the Bay of Gibraltar, they may ſee the foreſayd cape Porkes alongſt over Seuta: which is a poynt very eaſy
C. Porques. to be known, ſail towards that point, and with a weſtwinde luffe up ſo neere as you can. When you come about that poynt, then you ſhall begin to ſee Tetuan, which lieth up againſt the high land, a great league within the land: run then ſoo far to the ſouthwards, untill that the eaſt end of the towne come right over a little round hommock, which is upon the high land within. In the middeſt of the towne ſtandeth a black tower, and in the innermoſt land of all within, lye three little hills, which doe (as it were) looke over the outermoſt inner land, bring the three little hills over the foreſayd black tower, and anchor then ſo farre from the ſhoare that the firſt little hill of the high land to the ſouthwards of Seuta, towards cape
Marks of the Roade before Tetuan. Porques, come a little without Cape Porques, there it ſhall bee ſixteen fathom deep, & good ſoft ground. If you anchor otherwiſe then upon theſe foreſayd marks, you ſhall have bad, ſtony and ſharpe ground. It hath happened that ſome ſhips have anchored there, but their anchors fall ſo into the rocks, that they could not weigh them again, but muſt hew of their cables, and leave their anchors behinde them. Therefore if you come off from the point of Cape Porques, then bee carefull that you bring the foreſayd firſt little hommock (which lyeth a ſtearn of you in the bight of Seuta to the ſouthwards of Seuta) a little without the Cape Porques, and ſo keep ſayling to the ſouthward, and keep heaving of the lead continually without ceaſing untill that you get the ſoft ground, ſo ſoone as you ſhall feele it, let then preſently your anchor fal, for the place where the ſoft ground is, is not two cables length in compaſſe great.

Tetuan lyeth from Seuta about ſixe leagues, and three C. Te-
or foure leagues to the ſouthwards of it lyeth a point, cal- tuan.
led Cape Tetuan, whereupon ſtandeth a tower. He that hath never been at Tetuan, might eaſily be miſtaken by that poynt, taking it to be cape de Porques, the ſooner becauſe that ſome ſay that Tetuan at leaſt nine leagues to the ſouthwards of Tetuan. It hath happened that ſhips have ſayled unto this poynt, and have ſo runne paſt Tetuan, therefore it is beſt that men goe not too farre from the ſhoare either by night or by day for to get the cape Porques certainly in ſight.

The Bay of Tetuan betwixt the Cape Porques and Cape Tetuan, is a ſand-bay altogether of ſand-ſtrand with low hommocks here and there upon the ſea-ſide, which a farre of ſeeme as if they were ſhipps, but the ground thereabouts is altogether foule, except ſuch a place as before is ſayd. Betwixt the Cape Porques and Seuta it is alſo a faire ſandſtrand; but thwartof it is all good ground.

The Coaſt of Barbarie in the Straite of Gibralter, lyeth from Seuta to Cape de Spartell weſt and by ſouth, and weſtſouthweſt eight or nine leagues. But the Cape de Spartell, and Cape de Trafalgar on the Spaniſh ſide, lye north and by weſt, and ſouth and by eaſt eight leagues aſunder.

From Cape de Spartell to Arzila, the coaſt lyeth ſouth Arzila.
and by weſt ſeven leagues, betwixt them both alongſt the ſea-ſide, it is all lowe land, with ſome poynts and high land within, with a white ſandy-hilly ſtrand. A little to the ſouthwards of the poynt of Cape de Spartell, men may anchor for eaſterly windes in twelve or thirteene fathom, cleane ſand-ground, but ſo ſoone as the winde doe ſhift to the weſt they muſt bee ready to get under ſaile, leſt they be inbayed upon a lee ſhoare.

About a league to the ſouthwards of the Cape lyeth a little hommock upon the low land, by the water ſide, which ſheweth (in ſayling by) like a broken ſchonce or caſtle.

Arzyla is a little walled town, lying upon the water ſide, and hath a little bard haven, which men doe ſayle into at two places through a row of Rockes, which lyeth before it, the northermoſt channell is the deepeſt, but both of them are not fit but for ſmall ſhippes. Being come within the rocks, men doe anchor betwixt the town and the rockes.

From Arzyla to Alarache, the coaſt lyeth alſo ſouth and by weſt eight leagues, it is altogether a cleane coaſt with ſome rocks on the ſhoare, the land betwixt them both is ſomwhat higher then betwixt Arzyla and the Cape with high land within. About an Engliſh mile to the ſouthwardes of Arzyla ſtandeth a tower, and ſomwhat further to the ſouthwards, upon the high land ſtand ſome little houſes, but men cannot well ſee them, except they ſayle cloſe alongſt by the coaſt. Betwixt Arzyla and Alarache, but ſomwhat neerer Alarache then Arzyla, lyeth on the ſea ſide a high white cliffe, which is very eaſy to be known, betwixt that cliffe and Alarache ſtandeth upon the high land a very high tree, with ſome other trees by it, when men come from the northwards alongſt by the ſhoare, that great tree ſeemeth to be a tower, yet ſomewhat to the ſouthwards ſtandeth an other great tree, but not ſo great as the other: when men begin to come neere to Alarache,

or els by the ſouthermoſt great tree, then the foreſayd greateſt tree doth hide it ſelfe behinde the land. Theſe are all very good marks for to know this coaſt by, betwixt theſe two places.

Alarache lyeth with a great Caſtle upon the ſouth poynt of a river, which is very ſhoale and croocked, the north poynt is a low poynt going flat off, and within it, on the n. ſide of the river ſtandeth alſoo ſome buildings. Before the river lyeth a barre of quickſand, which lyeth off from the north poynt, where ſhips may goe in over with a ſpring tyde, through a Creeke, els it is but for Barkes & Friggats: men may anchor before it in the Roade in 16, 17, and 18 fathom.

Alarache is under the command of the King of Spaine, & is little or nothing uſed either by Engliſh or Dutchmen.

He that ſaileth alongſt this coaſt, muſt not come very cloſe to the ſhoare, unleſſe it were with a hard Levand, or eaſterly winde, with calme weather there goeth ſometimes a very great grown ſea out of the weſt or northweſt, ſo that ſomtimes men can hardly get off from the ſhoare.

From Alarache to Old Mamora the caoſt lieth ſouth and by weſt and ſouthſouthweſt betwixt ſeven or eight leagues, it is low land with ſand-hills with few places that are eaſy to bee knowne, all alongſt even to Mamora.

He that commeth out of the ſea, and falleth with the land, here on this coaſt, ſhall perceive little knowledge of the land, unleſſe hee fall with ſome of the inhaited places. This Old Mamora was wont alſo to be a haven, but is now altogether caſt to of the ſea.

Of the Tydes and Courſes of the Streames.

Before the Condaet on the coaſt a ſouthſouthweſt and northnortheaſt moon maketh high water.

Before Palos Moguer and Wolves maketh full ſea a ſ. and north moon.

Before the river of S. Lucas, and at Cales before the bay maketh full ſea a ſouthweſt and by ſouth and northeaſt and by north moon.

At Cales in the Bay maketh high water a ſouthſouthweſt moone.

The ebb falleth without the Puercos to the ſouthwardes towardes the Strait, and the flood towards the land to the northwards: but for the moſt part, the flood falleth thwart in to the land, about the havens.

In the narrow of the Strait maketh high water a ſouthweſt and by ſouth moon. The current runneth more to the weſtwardes then to the eaſtwards; when it is faire weather there goeth commonly 4 houres flood to the eaſtwards, and eight hours ebb to the weſtwards, but the moſt part of the time according as the winde is, and at ſometimes the current runneth ſo ſtrong, that it rippleth as if there where ſhoals.

Courſes and diſtances.

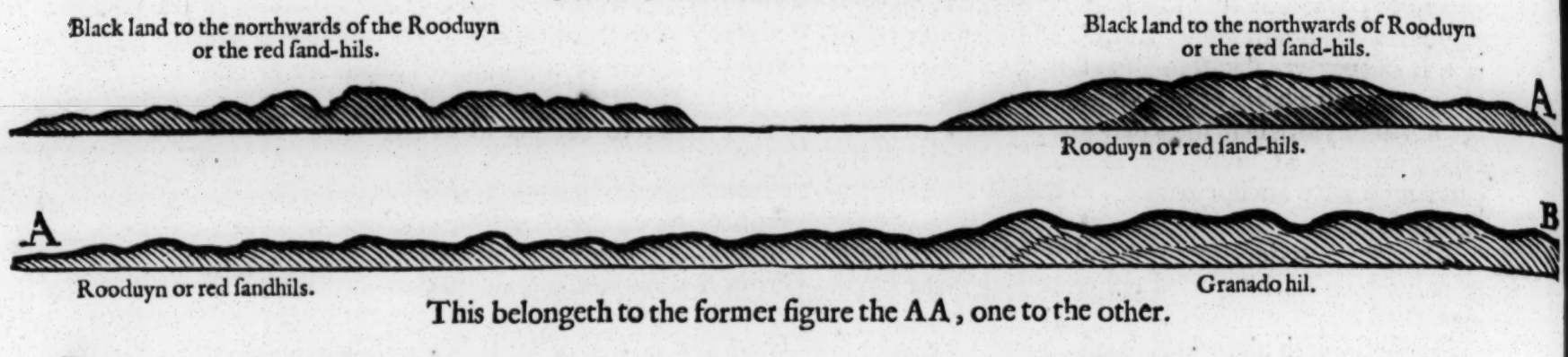
From Ayemont to Leep eaſt and by north 7 leagues.
From Leep to Saltees or Palos eaſt and eaſt and by ſouth 7 leagues.
From Saltees to the river of S. Lucas, or Sipiona ſoutheaſt and ſoutheaſt and by eaſt 8 or 9 leagues.
From S. Lucas or the point of Sipiona, to the point of Cales, the courſe is ſoutheaſt 9 leagues.
From Cales to the poynt of the Strait ſouthſoutheaſt 10 leagues.
From Cales to the great Canaries ſouthweſt 240 leagues.
From Cales to the Iſle de Madera w. ſ. w. 200 leagues.
From C. Trafalgar to Tariffe, the courſe is ſ. e. 4 leagues.
From Tariffe to the poynt of Gibraltar eaſt and by north 5 leagues.
From the poynt of Gibraltar to Marveles northeaſt by north 12 leagues.
From Marveles to Fangerola e. n. e. 5 leagues.
From Fangerola to the weſt poynt of Mallaga eaſtnortheaſt 2 leagues.
From the weſt point of Mallaga to the Towne of Mallaga northeaſt and northeaſt by north 4 leagues.
From the poynt of Gibraltar to Mallaga northeaſt 23 or 24 leagues.
From Mallaga to Veles Mallaga eaſt and eaſt by north 7 leagues.
From Veles Mallaga to Almunecar e. 15 or 16 leagues.
From Almunecar to Salobrena eaſt 4 leagues.
From Salobrena to Modrill eaſt & by north 2 leagues.
From Modrill to C. de Sacraſtyf e. n. e. 1 league.
From C. de Sacraſtyf to Caſtel de Fierro eaſt and by north 4 leagues.
From Caſtell de Fierro to Adera eaſt 8 leagues.
From Adera to Almeria northeaſt 5 leagues.
From Almeria to Cape de Gat ſoutheaſt and by eaſt 5 or 6 leagues.
From the point of Gibraltar to C. de Gat eaſt & by north 66 leagues.
From C. de Spartell in Barbary to the poynt of Apehill, the courſe is eaſtnortheaſt. 8 leagues.
From Apehil to the point of Seuta ſoutheaſt and by eaſt 2 leagues.
From the poynt of Seuta to the road of Tetuan ſouth 5 or 6 leagues.

Heights.

The coaſt of the Condaet lyeth in 37 degrees and 15 or 20 min.
The Iſland Cales in 36 deg. 30 min.
The middeſt of the Strait of Gibraltar lyeth in 36 or 35 degr. and 50 min.
Cape de Spartell lyeth in 35 degr. 32 min.

How theſe Lands doe ſhew themſelves at Sea.

The land betwixt Wolves & the River of S. Lucas, ſheweth it ſelfe when you ſayle alongſt by it like as is pourtrayed in theſe three figures following.



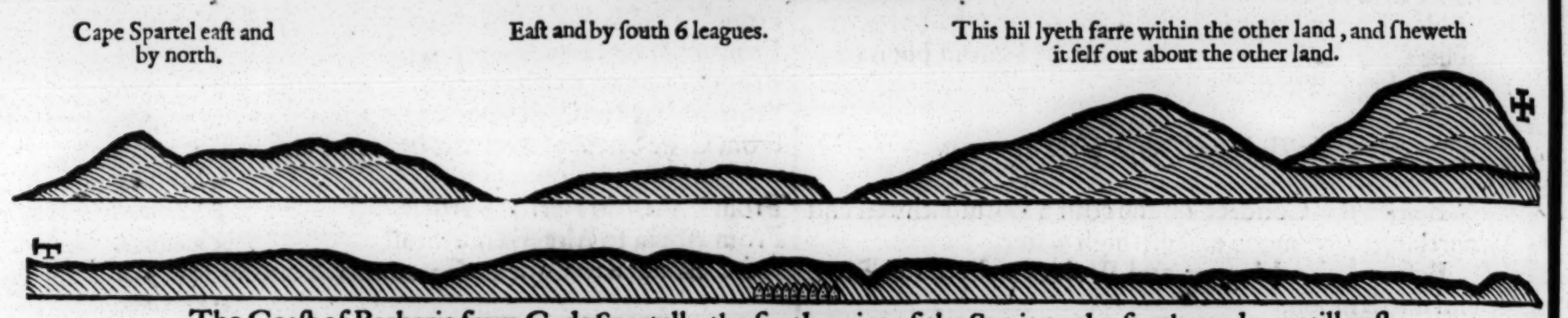
This belongeth to the former figure the AA, one to the other.



This followeth to the two former figures, the BB, one to the other.



When you ſayle towards Cales, and the mountaine of Granado commeth to ſtand eaſt from you then it ſheweth it ſelfe in this forme.



The Coaſt of Barbarie from C. de Spartell, the ſouth point of the Strait to the ſouthwards, untill paſt Alarache ſheweth like as it is pourtrayed in theſe 2 figures, when the Cape de Spartell is eaſt and by north from you about eight leagues.

The



HISPA:
NIÆ
PARS.
Strate van Gibralter
BARBARI
Duytsche mylen 15 in een graadt
Spaansche mylen 17½ in een graadt
Engel. en Fran. mylen 20 in een graadt
Sivilia
Salee
Lissona
Barlingas
C. de S. Maria
C. S. Vincente
C. Cantin
C. d. Geer
Darcheta R.
Graciosa
Lancerote
Fortuventura
Canaria
Ferre
Palma
Gomera
I. Tenerifa
Gerrachica
Sabrages
Porto Santo
Serters
I. Madera
Formigas
Abrolo
S. Michiel
S. Maria
Tercera
Gratiosa
I. S. Geor-
ge
I. del Pico
Fayal
Corvo
I. de la Flores

De Cust
van
BARBARIA,
Gualata, Arguyn, en Gene:
heo, van Capo S. Vincente
tot Capo Verde.

AFRICA PARS.

Gualata Regio.

Arguyn Regio.

Hoden. GENEHOE.

GAMBIA.

IALOFFI.

C. Verde

C. Blanco

Seche delle Graze

Cassan

Calbasiero

Mensajar

Gambia R.

Isole

I. de Bonavista

I. de Mayo

I. de Sal

I. de S. Iago

I. de S. Nicolas

I. de Fuego

I. de Brava

I. de S. Lucia

I. de S. Vincente

I. de S. Antonio

Man

The ſecond part of the New LIGHTNING COLUMNE, OR SEA MIRROUR.

THE FOURTH BOOKE,

Of the

WESTERNE NAVIGATION,

Containing

The deſcription of the Sea-Coaſts of Barbarie, Gualata, Arguyn, Genehoe, and the Flemiſh and Canary Iſlands together, from the Straight of Gibraltar, to Capo Verde.

The firſt Demonſtration.

In Which

Are ſhewed the Coaſtes of Barbarie from old Mamora to C. de Geer, together with the Flemiſh Iſlands.

Mamora

FRom Old Mamora to Mamora, the coaſt lyeth alongſt ſouth & by weſt and ſouthſouthweſt 7 leagues. Before Mamora is a high broad land-ſtrand, and is not eaſy to know, when you are ſomewhat off the land. The beſt knowledge thereof is this: When you come from the n. wards alongſt the ſhoare, you have all high land within, that you come leeſe when you come before Mamora, and when you come from the northwards, you cannot ſee the river of Mamora open before you bee paſt it, by reaſon that it lyeth into the eaſtwards, and the north point is low. When you come ſomewhat cloſe by the ſhoare, you ſhall ſee upon the high land in the Caſtle of Mamora (which the Spaniards have built there for the defence of the place) a very high maſt or ſtake, which you may ſee indifferent far off, and when it is cleare weather you may ſee alſo the high thick Tower of Salley to the ſouthwards ſtand againſt the land. Before the river lieth a Barre which with a ſpring hath 16 and 17 foote, and ſometimes more water, the Barre is oftentimes altered by the ſea. In the ſpring it lieth in commonly e. ſ. e. & thereabouts. In the later part of the yeare it lyeth in more eaſterly by the caſting up of the ſea out of the n. In the Summer the windes blow alongſt the coaſt, the moſt part of the time out of the north, which cauſeth that the current runneth there to the ſouthwards, & in the winter they blow much & ſtrang out of the ſouthweſt and ſouthſouthweſt. In the winter men muſt be very carefull to get of, betimes when the winde beginneth to come to the ſouth or ſ. e. then it is time to get of, for then commonly it ſhifteth to the ſ. w. and w. ſ. w. with foule weather, but when it commeth about againe to the weſtnorthweſt or northweſt, then it is like to be good weather againe.

Road before Mamora,

The roade before Mamora is about a league from the land in 18 and 20 fathom, there is clean ſandy-ground.

From Mamora to Salley the coaſt lyeth ſ. w. & by ſ. & ſ. ſ. w. ſix leagues, betwixt them both it is low plaine land, and ſandy-ſtrand, with double land within, which is ſo even and ſmooth, as if it were planed over. From Mamora not halfe wayes to Salley, the ſtrand ceaſeth, and from thence forth to the ſouthwards it is a ſhoare all of black ſteep ragged rockes with little hills, ſo that men cannot judge (when they are ſomewhat off the land) that it is double land within, by the plaines of it. When you are a league or two paſt Mamora, then you may ſee very plaine the high thick Tower of Salley, & when you ſee the foreſayd rocky ſhoare you may be ſure that you are paſt Mamora, that ſteepe rocky ſhoare continueth from thence, untill paſt Fedalle, yet betwixt Fedalle and Salley is here and there a place of white ſtrand, betwixt the rockes, but to the northwards of Salley it is not ſo, but nothing elſe then perfect rocks.

Salley.

The Towne of Salley hath a little Tower, and lyeth upon the n. ſide off the river, which is a low plain point of ſand. The Caſtle hath a little Tower, and lyeth over againſt upon the ſ. poynt of the river, which is a high rocky point. There goeth a wall round about the high thick Tower, & lieth upon a point on the ſ. ſide within the River. Before the River is a Barre which oftentimes with ſtorms out of the ſea doth alter and ſhift, and is caſt too, ſometimes the channell runneth by one of the two poynts, & ſometimes againe right in the middeſt of the rivers mouth. Hee that will anchor before Salley, let him bring the foreſayd high thick Tower (which ſtandeth within on the River) on the poynt of the caſtle, to wit, over the ſouth point of the River, which ſhall then ſtand from him neere about ſouth e. & anchor there in thirty, eight and twenty, 24, 20, 18, or 16 fathom, ſo neere or farre off as he will, there is clean black ſandy-ground, nevertheleſſe that the ſhoare thereabouts is ſo full of rocks & ſtones. Being come to anchor men muſt ſhoot a ſhot to cauſe the Moores to come off. From Salley to the Iſland Fedalle the ſhoare lyeth alongſt ſ. w. & by ſ. about 9 or 10 leagues, betwixt them both lye here & there in the ſand-ſtrand, long black rocks (as before is ſayd) ſo that oftentimes men might take it to be Fedalle. The beſt markes for to know Fedalle by is a wood of trees about a league to the northwards off Fedalle, which ſtandeth below upon the land, and ſheweth like a barne. When you come ſayling alongſt cloſe by the land,

Fedalle.

you ſhall ſee it above upon the land, but when you are ſomewhat off from the land, then you ſhall ſee the land within above the wood of trees, (or Barne as men doe commonly name it for the likeneſſe of it) alſo there lyeth a little round hommock about 4 leagues, to the northwardes of Fedalle, which you ſhall ſee above the reſt of the land, when you are ſomewhat off from the land, but when you come cloſe by the land, it hideth it ſelfe alſo behinde the double land. The coaſt betwixt Salley and Fedalle, is very plain & ſmooth double land, ſo that there is not another ſuch hommock more betwixt them both, as that foreſayd hommock, and in regard the coaſt there abouts is altogether ſo plain, without any places eaſy to be knowne, therefore men muſt take the more ſpeciall heed unto ſuch ſmall markes, for not to ſayle paſt the place where they are bound unto.

Betwixt the foreſayd Barne or wood of trees and Fedalle ſtandeth alſo a ruinous little Towne fallen downe, Monſor. in a rough wood, called Monſor, when you ſayle alongſt cloſe by it, you ſhall ſee yet ſome peeces of walles of it.

Road under Fedalle. To the ſ. wards of Fedalle the land is agayne higher, and where the high and low commeth together, it doth make a clift, thereby the Iſland of Fedalle is eaſy to be known, when that clift is ſ. ſ. e. from you, then is Fedalle thwart of it alſo ſ. ſ. e. from you. If you will goe into Fedalle, then runne right with the foreſayd Barne, or wood of trees, untill you come within a league, or ſomewhat neere to the land, and then alongſt by it, and ſo you ſhall not miſſe the Iſland Fedalle, but runne in betwixt it and the maine land, when as you come by the north poynt of Fedalle, then anchor betwixt the ſtrand and the foreſayd n. poynt, but much neerer the Iſland Fedalle then the ſtrand in 6, 7 or 8 fathom, ſo that you come to lye with your ſhippe ſo farre in, that the foreſayd poynt of the Iſland doe lye n. n. w. from you, then lyeth the foreſayd Barne e. n. e. from you, and Monſor a handſpikes length to the n. wards of the Barn or wood of trees; you may alſo anchor in 12 fathom, ſo that the poynt of Fedalle lye w. and by ſ. from you.

This bight within the Iſland Fedalle, is a very bad place to lye in, for although you lye there ſo, that the poynt of the Iſland lye n. w. and n. and by w. from you, and with a Cable on the Iſland, nevertheleſſe the grown ſea commeth ſo hard rowling in about the poynt of the Iſland (when the winde is weſterly) that you might rather deſire to lye in the open ſea, then within the Iſland: From the north poynt of Fedalle ſhooteth of a ledge or riffe of rockes a Musket ſhot into ſea, the moſt of them lye high above water; within the Iſland it is very flat towards the ſtrand, the Bay on the land is a faire ſandy ſtrand, there men may get ballaſt from the ſhoare, but they muſt bee very carefull to ſtand upon their guard, for there are dangerous people.

Depths and grounds about Fedalle. Before Fedalle, to wit, to the northwards off it, thwart of the wood of trees, and alongſt to Salley, it is all ſhowld water a league or two from the land, all alongſt that diſtance it is not deeper then 23, 24, and 25 fathom cleane ſand-ground, thwart of into ſea from Fedalle it is alſo of the ſame depth, but foule ground.

He that will trade at Fedalle muſt anchor ſomewhat farre in, for they have there no Boats, men muſt fetch the Moores aboard with the Boat.

Upon the north point of Fedalle lieth a high hommock, which ſheweth a far off when men come in, as if it were a caſtle falne down, but it is nothing elſe then rocks. At the ſ. end of Fedalle men may goe over on foot at low water to the maine land, but at high water the ſea waſheth through at 2 places, it floweth there 7 or 8 fat. up & down.

Three leagues ſ. weſt and by ſ. and ſ. weſt from Fedalle lyeth an old ruinous town fallen downe cloſe upon the Anafee. ſtrand called Anafee, it is a long Town with many towers, amongſt the reſt one high thick tower almoſt like the tower of Salley, but men muſt bee indifferent cloſe by it before you can ſee it. When you are thwart of Anafee, you may yet ſee the wood of trees to the northwards of Fedalle, which ſtandeth then to ſee to from far as a ſayle in the water, 2 leagues to the ſouthwards, (or rather to the weſtwards) of Anfee, or Anafee, is a ſteepe poynt with red cliffs, which ſeem a far off as if they where houſes ſuch ſpotters men ſhall find at divers places on the coaſt.

From Anafee to Azamor the coaſt lyeth ſ. w. and by w. Azamor. weſterly 18 leagues betwixt them both lyeth another fallen place called Lyones. Azamor hath a poynt lying out on the eaſt ſide, when you come ſayling alongſt the ſhoare from the northwards, Azamor lyeth then about or behinde that poynt upon the ſtrand, but ſtandeth high. A little paſt Azamor lyeth a river, and thereabouts are ſome towers in the low land.

Three little leagues to the weſtwards of Azamor lieth the town of Maſagam, on a white ſtrand cloſe by the ſea Maſa- ſide this town is inhabited by the Portugals, or Spanjards, gam. it hath no towers, and ſheweth to ſee to off at ſea, in white ſpots againſt the land. When you are thwart off from it, you ſhall ſee to the ſ. wards the high tower off Tyro (which is a town fallen down about 2 leagues to Tyro. the w. wards of Maſagam) allmoſt like the tower of Anafee. A little to the w. wards of Maſagam, at the w poynt of the Bay, ſhooteth of a ledge or riffe of rocks, almoſt a league off into ſea, whereof the rockes at high water, lye moſt under water, and at low water are uncovered. He that will anchor there and is not well acquainted, muſt take in a Pilot, which may bring him to a place where is good anchor ground, for although that it be a great Bay, yet nevertheleſſe there are few places where the ground is clean; but is at many places foule, ſo that but few ſhips ſhould be able to lye there in clean ground, when you lie in the right road, then lieth the e. point of the Bay e. and the w. point about n. w. from you.

About a leag. to the w. wards of Tiro lieth a ſteep point when you come from the e. wards alongſt by the ſhoare, you ſhall ſee no more land without the point, untill that you come near it, when you begin to get it upon your broad ſide, then there commeth out to the weſtwards a great ſquare cliff, which is very eaſy to be known, and is [illegible] with reddish ſpots, and ſeemeth a far off as if it were a wall. This point is called after that white poynt, C. Blanco. About 3 leagues to the w. wards of this C. Blanco, C. Blan- ſtandeth a little tower upon the high land, near by a valley co. called Caſa Cavalgera, and 2 leagues more to the w. wards Caſa Ca- lieth upon the high land another little houſe called Emin- valgera. dra, but you muſt be cloſe by the land before that you can Emindra. ſee it. From the foreſayd C. Blanco to the C. Cantin, the coaſt lyeth w. ſ. w. and ſ. w. and by w. about 9 leagues.

The C. Cantin is an even plaine point, when you are to C. Can- the n. wards off it, it ſheweth flat towards the w. & going tin. off towards the ſea: there ſtandeth a fire-tower upon it, but very ſmall, that ſometimes you can hardly ſee it. If you come from the northwards, or from C. Vincent, and are bound to Saffia, then ſet your courſe ſouth and ſ. and by eaſt, and then you ſhall fall with the land 4 or 5 leag. to the e. wards of C. Cantin, or if you ſayle a more weſterly courſe you ſhall runne till you come in the height of 32 degr. & a half, and then the C. Cantin ſhall lye due e. from you, it is better to fall a little to the eaſtwards off the C. then to the w. wards of it, becauſe the winds blow there moſt common northerly. If you fall to the eaſtwards of the C. the coaſt lyeth there ſ. w. and by w. and w. ſ. w. and it is even plaine land. About 10 leagues to the e. wards of the C. lyeth that little town Tyro, with a high white tower upon the ſea ſide, & 5 or 6 leagues more to the weſtwards (betwixt Caſa Cavalgero and C. Cantin) you ſhall ſee a little bight or Bay, thereabouts lye upon the ſtrand by the water ſide, great black rockes, which ſhew as if they were wrakes of ſhips, and then forth alongſt to the C. it is a faire flat ſandy ſtrand. From the C. ſhooteth off a ledge off rocks ſomewhat of into ſea, which men muſt avoid when they ſayle about the Cape.

From C. Cantin to the north poynt of Saffia, the coaſt lyeth ſ. or ſomewhat more weſterly, 5 or 6 leag. betwixt them both it is a ſteep rocky land without ſandy ſtrand, but above upon it plaine and even. A league to the ſouth-

wards

wards of the C. lieth a riffe or ſhoale by the ſhoare, by ſome called the Gold-bancke and lyeth about a league off from the land: at ſometimes of the year there is much fiſh to be taken.

Saffia. To the ſouthwards of the Bay of Saffia is high uneven, and moſt of all double land, but to the ſouthwards of it, it is even & plain, thereby men may eaſily perceive or diſcern whether they be to the northwards of Saffia, or to the ſouthwards of it.

For to anchor in the Bay Saffia. If you will anchor in the bay or road before Saffia, then bring the north poynt (whereupon ſtandeth a tower) a little more weſterly then n. from you, & anchor then in 18 fathom. Or if you will anchor further in the Bay, then bring the foreſayd north poynt n. n. w. or a little more northerly from you, and then the northermoſt of the two north points ſhall bee a ſhippes length without the ſouthermoſt or the next unto you, run then ſo farre to the ſouthwards untill that the tower were men doe land with the boats (which is a high ſquare tower ſtanding below even within the wal of the towne) come right over a tower which is faſt to the wall, which commeth off from the Caſtle above to the ſouthwards, ſo that the foreſaid thicke tower below come right over the Haven, betwixt the poynt where the caſtle ſtandeth upon the water ſide, and the rocks where men goe in betwixt. Or elſe anchor that the high Caſtle of Saffia ſtand e. and by ſ. and e. ſ. e. from you, there it is 16, 17 and 18 fathom deepe, good fine ſandy ground. You may alſo anchor ſo farre within in the Bay in 15 & 16 fathom that the north poynt come to be n. w. & n. w. & by n. from you. Theſe are the Summer road, in the Winter men muſt anchor further from the land in 28 or 30 fathom, there the ground is courſe ſand. Men may boldly run in before Saffia into the road by night, there is nothing that they need to feare, which may doe them hurt, but the land.

About two leagues from Saffia, lyeth the ſouth point of the bay, which is a low point that lieth out, and two leagues to the ſouthwards of it lieth another ſteep rocky point without ſandy ſtrand. By it goeth in the River Tan- ſit up into the land unto Marrocos.

From the poynt of Saffia to the Iſland Mogodor, the coaſt lyeth ſouthſouthweſt 19 or 20 leagues.

Iſland Mogodor. Againſt the northeaſt end of the Iſland Mogodor, there ſhooteth off from the maine land, a great row off rocks; being hard ſharpe rockes, whereof the outtermoſt or thoſe that lye next to the Iſland Mogodor, lye high above water: He that commeth from the northwards, and will ſayle in behind the Iſland Mogodor, muſt runne in betwixt the Iſland and the foreſayd rockes, cloſe in alongſt by the Rocks. It is there in comming in, betwixt the Iſland and the Rockes five fathom deep. Within the foreſayd Rocks lye alſo ſome other Rockes on the larboard ſide, which at high water are under water, and at low water are uncovered. When you come to the end of them, you may luffe up about by them towards the maine land, and anchor there within them in 3 fathom at low water, there is good ſand-ground. But yet nevertheleſſe it is not there very good lying, for by reaſon of the breaking of the Sea upon the foreſayd rocks, there goeth ſometimes a great Sea, ſoo that it is not good lying there with a ſtorme, but further in, under the Iſland it is good lying in two fathom and a halfe. From the ſouth-end of the Iſland lyeth off a little riffe towards the maine land almoſt to the foot ſtrand, and to the ſ. wards off that foreſayd little riffe, lyeth a bancke off from the maine land almoſt a league off into ſea. If you will ſayle out at the ſouth end, then run alongſt by the ſhoare of the maine land, untill that you bee about the foreſayd riffe, and run out then upon your lead along by the banck, & then you ſhall preſently get deeper water, of 4, 6, 8, & 10 fathom, then you may ſayle there where you deſire to be.

C. de Geer. From the point of Saffia to C. de Geer, the courſe is ſouthſouthweſt about 43 leagues, but from Mogodor the ſame courſe is about 22 or 23 leag. It is there betwixt them both a faire flat ſand-ſtrand, with bouble land, which at ſome places is very high.

C. de Taffalana. About 8 leagues to the northwards of C. de Geer lyeth a point called C. de Taffalana, under which men may ride in good ſand-ground for eaſt and northeaſt windes. The C. de Geer is lower then the land to the northwards of it, and falleth to the ſouthwards flat off into ſea, which men ſhall firſt perceive when they come within 3 or 4 leagues of it. About 4 leagues to the northwards of the Cape lyeth a high Hommocke within the land, & further northwards the land is yet higher; but when you come thus from the northwards near C. de Geer, you ſhall ſee no more land to the ſouthwards of it. When you come to the poynt you muſt give the riffe a birth that lyeth off from it, and runne about by it, and then forth ſoutheaſt and by eaſt, and ſoutheaſt 7 or 8 leagues to S. Cruz, and then you ſhall ſee the Moores Caſtle ſtand on the high land: thwart of it lye a row of Rockes, about a Calliver ſhot in length, elſe it is all a cleane and cleare coaſt. For to anchor there in the Bay, runne ſo farre into the Bay, that the foreſayd Moores Caſtle ſtand north from you, and the Chriſtians packhouſes northeaſt, there it ſhall be deepe (to the ſouthwards or the foreſayd row of Rocks) 7 and 8 fathom, the north point or C. de Geer, ſhall then bee from you northweſt and by weſt, there is the beſt road. In the Summer time you may anchor nearer to the ſhoare, untill you come in ſix and ſeven fathom. When you ſayle from C. de Geer towards the playe or the Road, you muſt be carefull to keepe cloſe aboard of the land of the Cape, and run alongſt by it, untill you come before the Caſtle. If you runne farre off from the ſhoare, you ſhall with northerly windes (which blow there much) be conſtrained to come in n. e. & n. n. e. again for to recover the ſhoare, therefore it is beſt to keep cloſe aboard the high land. He that ſhould come into the road here by night, muſt not (upon a certain great forfeiture) come nearer the ſhoare then in 12 or 14 fathom.

Riffe of C. de Geer.

Road before S. Cruz. In this Road men muſt be very carefull and ready with their anchors, the inmaſt bower muſt be alwaies laid out for the wind which bloweth off the land, and the other anchor to Seawards. The ſhoot anchor muſt bee alwayes ready againſt a ſtorme (which men may very well perceive before by the ſwelling or riſing of the ſea) to bring it out in the ſouthweſt. Alſo it is needfull to keepe the foreſayle to the yard, for to helpe themſelves with it the beſt that they can if it ſhould happen that they ſhould be forced from their anchors.

In this Bay is much fiſh to be taken, when men lie there in the road, they take their turnes to go out to fiſh.

From the C. S. Vincent ſouth-weſt and by weſt 140 leagues, & from the Cape de Finiſterre ſouthſouthweſt and ſouthweſt and by ſouth 232 leagues, lyeth the Iſland Porto Santo lying ſoutheaſt & northweſt upon each end of this Iſland lyeth a great rock. The road on the ſ. weſt ſide, to the eaſtwardes of the ragged rock, before a little haven where men may lye landlockt with boats.

Porto Santo. Madera. Serters. The Iſland Madera lyeth from Porto Santo ſ.w. 16 leagues, ſ. wards from the eaſt poynt of Madera, lie 3 ſmall rocky Iſlands, being called the Serters, the northermoſt is the ſmalleſt, and lieth about a league from the land from the foreſayd point, the ſouthermoſt is the greateſt, & lyeth 4 leagues from the land. He that commeth from the n. wards, or from Porto Santo, may ſayle through betwixt them and the poynt of Madera, it is there betwixt them broad & wide, & alſo cleane & cleare every where, onely at the foreſayde e. poynt of Madera lyeth a ſuncken rock, whereof men muſt take heed.

C. Cruz. At the ſ. ſide of the Iſland before the Towne S. Cruz is a good road in twinty fathom, but before Fonſiall is the chiefeſt Road for to lade: to the weſtwards of the Towne lyeth a great rock with a croſſe, called the Lion, by it is the beſt lying in 30 or 40 fathom.

At the ſouthweſt weſt ſide before Maraſilo is alſo good anchoring in 16 or 18 fathom. In all theſe foreſayd places is good ground for to anchor in.

Salvages. Betwixt Madera and Teneriffe lyeth the little Iſland Salvages, to wit, ſouth from the Serters forty leagues. North from the northeaſt poynt off Teneriffe ſeven and twenty leagues, and northnorthweſt from the northeaſt poynt off Great Canaries, forty, or two and forty leagues it lyeth ſ. w. and northeaſt and is about a halfe league long. The ſ. w. end of Salvages is foule farre off into ſea, therefore runne rather about to the eaſtwards of it then to the weſtwards. Three or 4 leagues ſ.w. from that poynt, amongſt other rockes, lyeth one great rock which ſheweth a far of like a ſayle. Under the ſ. e. ſide of the Salvages is a good road for a n. w. and weſt wind.

Saint Michaels Madera and the Iſland S. Michaels lye n. w. and ſ. e. 135 leagues diſtant. At S. Michaels, the road is at the ſ. w. ſide off the Iſland, when you come about one of the two poynts, either from the eaſt or weſt, then you ſhall ſee two little towns. Before weſtermoſt, called Punte de Gada, or Punt Alagato, is the Road in 20 and 25 fathom.

Punto de Gada.

Before the eaſtermoſt little towne lyeth a little Iſland, betwixt that and the land of S. Michaels it is 5, 6 and 7 fathom deep. Betwixt theſe two little townes, the coaſt lyeth w. n. w. and e. ſ. e.

Tercera. From S. Michaels to Tercera, the courſe is n. w. and by w. foure and thirty leagues. Under Tercera the road is on the ſ. ſide of the Iſland, to the weſtwards of the rockes, right before the towne Angra, betwixt two points that lie out, upon each off them ſtandeth a Caſtle for defence off the ſhippes which lye there in the Road, the weſtermoſt off the two poynts lyeth a good wayes further out to ſeawards then the eaſtermoſt, and hath upon the end of it, two very high, called Braſil, when you come out off the ſea, either from the eaſtwards, or the weſtwards, it ſeemeth a farre off as if it were aſunder from the land. Theſe two foreſayd hills upon the poynt off Braſill, are ſo high, that in cleare weather men may ſee from thence 16 or 17 leagues farr off into ſea. Upon it ſtand 2 pillars, which men may ſee every where in the towne Angra, and a watchman thereby for to keepe watch, and to give them off the towne warning off the ſhippes that come about the Iſland. As many ſhipps as hee ſeeth come from the weſtwards or the ſouthwards, that is, from the Weſt-Indies, Braſill, or the Portingals Indies ſo many Flags he ſetteth up upon the Pillar towards the weſt, when he ſeeth more then five ſhips, then hee ſetteth up a great Flagge, which ſignifieth a whole Fleet. Likewiſe hee doth the ſame upon the other Pillar towards the eaſt, for the ſhippes which he ſeeth come from the eaſt, from Portingall or from the northwars, ſo that there cannot a ſhippe come thereabouts, but mem may ſee it preſently by that token in every corner and ſtreet of the Towne.

Angra.

For to ſayl into the road of Tercera. He that commeth from the eaſtwards, or the northwards and is bound into the Road of Tercera, let him run faire by the land off the eaſt poynt, and alongſt by it unto the 2 little Iſlands, called the Ilheos, which lye a little to the eaſtwards of the road, about a bow ſhot one from the other. Men may run alongſt to the ſouthwards off theſe Iſlands, or to the northwards of them, as they will, and alſo betwixt them both. Betwixt theſe little Iſlands and the maine land of Tercera, it is a great cannon ſhot broad, and 15 and 16 fathom deepe, through betwixt the little Iſland it is 5 and 6 fathom deepe cleane ſand-ground. Somewhat to ſeawards of theſe little Iſlands, lye 3 or 4 rockes above water, called Los Frayles. Being paſt theſe foreſayd little Iſlands, you muſt ſayle to the weſtwards, untill that you come neare to the foreſayd poynt of Braſill, a little to the eaſtwards of it you muſt anchor before the town of Angra in 10 or 12 fathom, or elſe men lay their ſea-anchor commonly in 16, and their ſmaller anchor towards the land in 8 or 9 fathom. Men lye there landlockt for a ſ.w. and n. e. and alſo for an e. n. e. winde, but a ſ. e. winde bloweth there flat open in. On the w. ſide of the point of Brazill is alſo a great ſandy Bay for to anchor in before a village, called S. Martin.

Los Frayles.

Three leagues to the eaſtwards of the Towne Angra, lieth a bight, called Porto Judeo, there the Spaniards landed with their forces, when they tooke in the Iſland from the Portingals.

He that will ſayle from Tercera to Fayall, let him ſet his courſe w. ſ. w. to the e point of S. Georges, which is from thence ten leagues aſunder. Further, betwixt the Pico & S. Georges through to Fayall are 16 leagues, it lyeth moſt w. n. w. through betwixt them & the Iſland Fayall lyeth to the weſtwards of the Iſland of the Pico a great league aſunder off from it.

He that will anchor in the Road of Fayall, let him anchor right before the Village of Fayall in 14 or 15 fathom, there is ſand-ground; but there goeth a hard tide of flood and ebbe.

On the ſ. w. end of the Iſland Fayall lieth a little haven for to ſayle in there, you muſt run in by the ſ. w. point, ſo long about by the ſhoare, untill that you ſee the haven open, ſaile alongſt about by the ſ. w. point untill that you come in the narrow, betwixt the rocks which lye of from the weſt ſide, ſo ſoone as you come within the rockes let preſently your anchor fall in 5 fathom, & bring your hawſers on the eaſt ſide on land faſt to the pales, which are there made for the purpoſe: the haven is little ſo that men may lie in it with no more then with 4 or 5 ſhips. Further in it is ſhoale water.

Of the Tydes and Courſes of the Streames.

On the foreſayd coaſts maketh high water a ſ. ſ. w. & ſ. w. and by ſ. moon.

Courſes and Diſtances.

From C. Spartel to C. Cantin it is ſouthweſt ſoutherly 85 leagues.
From C. Spartel to Madera weſt & by ſouth and w. ſ. w. 200 leagues.
From C. Cantin to Madera weſt 130 leagues.
From C. Cantin to S. Vincent north 90 leagues.
From C. Cantin to Teneriffe ſ. w. and by w. 148 leag.
From C. Cantin to C. de Geer ſ. ſ. w. 50 or 52 leagues.
From C. de Geer to C. de Non ſ. ſ. w. and ſouth & by w. 27 leagues.
From Cape de Geer to the point of S. Cruz ſ. e. 5 leagues.
From C. de Non to Oſſin ſouth 13 leagues.
From C. de Non to C. de Bajador ſ. w. and by w. 69 leag.
From C. de Geer to C. de Bajador ſ. w. ſomewhat weſterly, 110 leagues.
From Saffia to Madera and e. and w. 130 leagues.
From C. de Geer to Madera w. n. w. 123 leagues.
From S. Michiels to Tercera n. w. and by w. 34 leagues.
From Tercera to the eaſt end of S. Georges weſtſouthw. 10 leagues.
From the eaſt end of S. Georges to Fayall weſtnorthweſt 16 leagues.
From Saint Michaels to the C. de Finiſterre eaſtnortheaſt 247 leagues.
From Tercera to Roxent, or the River of Liſbon e. at leaſt 267 leagues.
From Tercera to C. de Finiſterre eaſtnorth e. & e. & by n. 280 leagues.
From Tercera to the Lizart n. e. & by e. 287 leagues.

Heights.

Maſagam lyeth in	32 degr. 46 min.
C. de Cantin lyeth in	32 degr. 32 min.
The land Mogodor in	31 degr. 18 min.
C. de Geer in	30 degr. 10 min.
C. de Non in	28 degr. 32 min.
C. de Bajador in	26 degr. 10 min.

How

How theſe Lands doe shew themſelves at Sea.

Caſa Cavalgero.



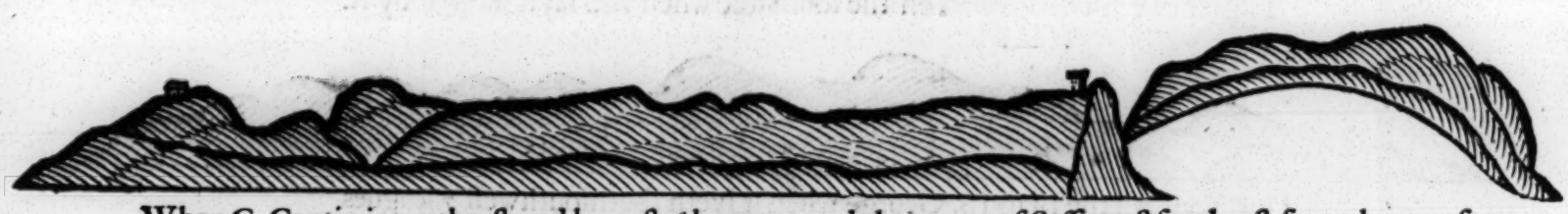
Thus ſheweth the land betwixt Maſagam and C. Cantin.



Thus ſheweth it ſelfe Caſa Cavalgero, when it is ſouth from you 6 leagues.



When the northerne Corner of Saffia is ſouthſoutheaſt from you 4 leagues it ſheweth in this forme.



When C. Cantin is northeaſt and by eaſt 6 leagues, and the poynt of Saffia eaſtſoutheaſt foure leagues from you, then they ſhew themſelves thus.

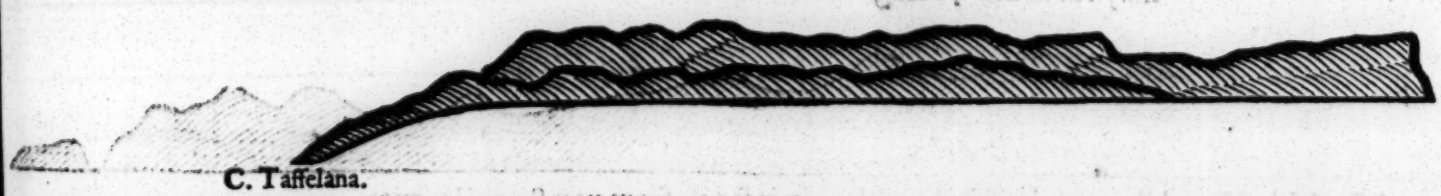


Thus ſheweth the land to the ſouthwards of the ſouth poynt of the Bay of Saffia, when it is eaſt-ſoutheaſt 3 leagues from you.



Mogodor.

When you are weſtnorthweſt or thwart off from Mogodor, 3 leagues, then ſheweth it ſelfe thus. It is a high and double land.



C. Taffelana.

When the Cape de Taffelana is northnortheaſt 3 leagues from you, the land ſheweth thus unto Cape de Geer.



C. de Geer.

When the C. de Geer is northnorthweſt 3 leagues from you, it ſheweth thus, and when the Bay is eaſt and by ſouth from you, the land is with ſand-hils.



Thus ſheweth the Iſland Saint Michaels on the north ſide.



Thus ſheweth the Iſland of Tercera, when it lyeth e. and by ſ. about 7 leagues from you.

When



When Tercera is 4 or 5 leagues from you, then it ariſeth thus, the weſt end of this Iſland Tercera is higher then the eaſt end, thereby it is indifferent eaſy to be knowne.



Thus ſheweth Tercera on the north ſide.



Thus ſheweth the Tercera on the ſouth ſide when you ſayle alongſt by it.



Thus ſheweth the Iſland S. George when it lyeth ſouthſouthweſt 7 leagues.



When the weſt end of S. Georges is ſouth and by eaſt and the eaſt end ſoutheaſt from you, it ſheweth it ſelfe thus, being eight or nine leagues of from you.



When the Iſland Pico is ſoutheaſt from you, it ſheweth it ſelfe thus, the high Pieck you may ſee about 40 leagues of from it at ſea.



The Iſland Fayal ſheweth it ſelfe thus when it is ſouth from you 8 or 9 leagues.



When the Iſland Gratioſa lyeth weſtſouthweſt 4 leagues from you, then it ariſeth in this forme.

The

Caarte
Voor een gedeelte der Canariſe Eylanden als Canaria, Teneriſa, Forteventura, etc.

Palma
Taſſacorte
S.Cruz
Ferro
Gomera
De Leeuw
Ydoza
Pico
Tene-
rifa
S.Cruz
Pico
Ponte de Naze
Groot
Canaria
Canaria

Duytſche mylen 15 voor een graadt

Spaanſche mylen 17½ voor een graadt

Engel. en Fran. mylen 20 voor een graadt

De tyhaven Porto de Naos en Porto de Cavallos aen de Zuyd: oostzyde van Lancerota

L A N C E R O T A

Sabuges

Capen oft Noorders

Porto de Naos

Capen oft Noorders

Kerck

Porto de Cavallos

C. Cabrion

I. Forteventura

Berch matte hoogten

Forteventura

C. Ladron

Lancerota

Pt Nau

Pt Cavallo

I. de Lobos

Alegranza

The ſecond Demonſtration,

In which

Are to be ſeene the Canary Iſlands.

THe chiefeſt Iſlands of the Canaries are 7 in number, Lancerota, Forteventura, or Porteventura, great Canaries, Teneriffe, Gomera, Palma, and Ferro. The Iſland Lancerota lyeth from Cape S. Vincent ſouthſouthweſt diſtant about 165 leagues. It hath one haven upon the northeaſt end, betwixt the two Iſlands Alagranca and Gratioſa, where men may come in from the northwards & lye landlockt for all winds, it is deep there 10, 15, and 20 fathom, and they may ſayle out againe to the ſouthwards along by Lancerota. At the eaſt ſide of Lancerota is a good road before the Towne of Lancerota, there lyeth a banck to the northwards of it, which men muſt avoyd, and run about to the ſouthwards of it, there they may anchor in 10, 11, and 12 fathom: on the ſame ſoutheaſt ſide lye alſo two bad havens a great ſhot of a caſt peece one from the other, the northermoſt is called Porto de Naos, & the ſouthermoſt Porto de Cavallos, which we have demonſtrated in a large volume in the northweſt corner of this card, & ſhewed the dephts with number of feet at high water and ſpring-tide.

Porto de Naos, the deepeſt of theſe bad-havens, goeth in northweſt and by north betwixt two ledges of rockes, there ſtand two beacons of heapes of ſtones, in manner as the warders of Norway, which you muſt bring and keepe one in the other, and ſayle ſo right in through betwixt the two foreſayd ledges of rockes. The ſhoaleſt of the Barre betwixt the two ledges of rockes, is but a ſhort ſpace, a great ſhippes length long, and is deepe at high water 17 foot, and at low water ſeven foot, ſo ſoone as you ſhall be over, it will preſently bee 20, 24, 26, & 28 foot deep, then you muſt edge up n. and then preſently northeaſt & anchor behinde the rockes which lye to the northwards of the Barre, in the Channell the ground is rocky, hard, and uneven. If a ſhip ſhould come to ſtrike there, it ſhould preſently be broken. The ledge is ſo without as it is within, very ſteep, ſoo that you may come very cloſe unto it, where the anchors ſtand marked, it is altogether cleane ſandy ground, 30 & 34 foot deep at high water, with a ſea wind there can goe here a great ſea, but that happeneth ſeldome, for the winds doe blow moſt out of the n. & n.e. and therefore it is almoſt alwayeth there ſmooth water. This haven is very narrow betwixt the rockes, which lye to ſeawards of you & the ſhoare, it is but a little more then a great cables length broad, and from the havens mouth to the main land about a Cables length & a halfe. The Havens mouth alſo is not broad, but at high water the rockes doe flow a good wayes on both ſides under water, which at low water againe are uncovered.

Betwixt Porto de Naos and Porto de Cavallos lye two little Iſlands, the northermoſt is the greateſt, at high water men may goe through with boats within the Iſlands, into Porto de Cavallos, but not with ſhips for at low water it falleth dry there within. Upon the ſouthermoſt little Iſland ſtandeth an old Caſtle fallen downe, which here to fore hath beene ſpoyled by Engliſhmen. From the ſouth ſide of that little Iſland ſhooteth of a riffe, & to the ſouthwards or the weſtwards of it lyeth in the Barre, which is very narrow, not above ten fathom broad, upon the maine land ſtand alſo two little beakons, as at Porto de Naos, which you muſt bring one in the other, and ſaile ſo right in. At high water and ſpring-tide there is no more then twelve foot water, or an halfe foot more, the ground in the havens mouth is alſo hard, & nothing elſe then rocks, where you muſt goe in over, but within it is cleane ſandy ground where you may lye a ground without any danger, with a ſhippe that draweth tenne or eleven foot water. At the higheſt water the moſt part of the rockes on both ſides of the Havens mouth, lye under water, ſo that at many places men may goe over them with boats. At low water there remaineth in this Havens mouth no more then a foot, or a foot and a halfe depth, ſo that a ſhippes boat cannot goe in; within men lye landlockt for all windes, and although it blow very hard, yet the water is alwayes ſmooth. In both theſe havens a ſouth and by weſt and north and by eaſt moone maketh high water. Neare the Havens there are no houſes where Spaniards or Moores doe dwell, then only by Porto de Cavallos a little church, where they have Maſſe ſayd on Sundayes, when ſhippes lie there. Men go from thence betwixt the Mountaines to the town, which lieth 3 leagues from thence. He that wil come here muſt provide himſelfe with freſh water, for there is very ſeldom freſh water to be gotten. Upon this land there groweth neither fruit nor wine. In ſome good years it giveth out Wheat, Bally, & Orſilly, the Inhabitants are Moore under the command of the King of Spaine.

Betwixt Lancerota and Forteventure lyeth a little Iſland called Iſle de Lobos, which is on the outer ſide, to wit, on the n. weſt ſide, very foule. Men may anchor on both ſides of that Iſland in 15 or 20 fathom, alſo in ſix fathom a ſhot of a caſt peece ſouthweſt and by weſt from the weſt point off the Iſland, there men may lye land-lockt for all windes, except for a northnorthweſt and ſoutheaſt windes. The coaſt of Forteventura is at the northeaſt end very foule, with many riffes that lye out, whereupon the ſea doth break exceedingly.

The Iſland of great Canaries lieth from Forteventura weſt 19 or 20 leagues diſtant. The road there lyeth, at the eaſt ſide of the Iſland, behinde the n. e. point, thwart off a Caſtle that ſtandeth upon a Chindle. The foreſaid northeaſt point, is a very high point, with a long ſmall and low ſandſtrand faſt to the other land, ſo that when it is five or ſixe leagues northweſt or ſoutheaſt from you it ſeemeth to be an Iſland aſunder off from the other land. If you deſire to go in there into the road, then ſaile about by that northeaſt point, alongſt by the Iſolettes, leaving them on the ſtarboard ſide of you untill that the Caſtle do lie near about northweſt and by north from you, anchor there in eight, nine, ten, or twelve fathom, then lieth the north point northeaſt & by north and the ſouth poynt ſouthſoutheaſt from you.

At the ſouth end of the great Canaries is a faire ſand-bay called Maſpalomba, there is a good road for ſouther-ly windes, & freſh water to be gotten.

The north point of the great Canaries, and the northeaſt point of Teneriffe, called Punte de Nago, lie weſtnorthweſt, and eaſtſoutheaſt diſtant 21 leagues. In Teneriffe is a road on the ſoutheaſt ſide before the town S. Cruz, there is a faire ſand-bay, a little to the northwards of the town is the beſt road in 20, or 24 fathom, and then Punte de Nago, the northeaſt point of Teneriffe lieth northnortheaſt from you, and the ſouth point ſouth and by weſt. When the Pico of Teneriffe is weſtſouthweſt from you, then are you open before this road of S. Cruz, and when you lye in the road of S. Cruz, you may ſee the Iſland of great Canaries ſoutheaſt from you about 13 leagues.

On the northweſt ſide of Teneriffe lieth the road of Garrichica, from the northeaſt point Punte de Nago weſtſouthweſt and ſouthweſt and by weſt eight or nine leagues; He that will anchor before Garrichica, let him anchor to the weſtwards of the rock with the croſſe, called the Lion, ſo that the foreſayd rock do lie ſoutheaſt and by eaſt and ſoutheaſt from him, then he ſhall lie right be-

fore the towne, and may see right into the street of the town, through the Cloister of S. Dominicus, there is clean ground in 36 or 40 fathom, the Pieck lieth then over the w. side off the town, nearer to the land, or to the rock then in 35 or 36 fathom it is not cleane, & westwards towards the riffe Lapania it is also foule ground. This is a dangerous road, therefore every one that commeth here, must be very careful to have their anchors, cables, and sailes very preedy and ready for to shift roads as soon as it beginneth to be a storme.

There is also a little haven before Garrichica, where men may lie with a few ships. For to sayle in there, you must have a Pilot. On the west side of the havens mouth lieth a rock under water, but the sea breaketh alwayes upon it, you may anchor within in the haven in five or six fathom, and must bring two anchors out a head to seawards, with a cable on the rocks, and a anchor out a stearn, on the land, so that the ships cannot wend too and again, the ground is there foule, you must buye up your cables with buyes and cask for to keep them from the ground. This is a good haven in Summer, then it is commonly good weather, but in the winter it is not good to com in there with a ship, for the grown sea out of the n. west commeth runnig in there sometimes so forcible and strong, that it is not possible to hold a ship, although she had 10 anchors out. It hath hapned certain years past that there was lost in the same haven a great many ships, and a great many houses of the same towne washed away with the great water.

Betwixt Garrichica and the east end of Teneriffe, are three lading places more for to lade wine at, as Maramela Relecho, and Oratama.

At the southwest end of Teneriffe lieth also another little haven or Bay where is much wines laden called Adessa, there is alsoo good lying except it be with a s. w. winde, which bloweth there open in:

From Teneriffe to the Island la Palma, the course is westnorthwest twenty leagues. On the southeast side la Palma, lieth a faire Bay, with a town and lade-place called S.Cruz. He that commeth from the northwards, and desireth to anchor in the road, let him run so far in the Bay untill he be to the southwards, or past the head, or the bridge, & anchor there in five and twenty or 30 fathom. In winter time men must not anchor so near the strand, because of the southeast or southsoutheast windes, for then they should lie too near the strand. Men lye there moored with two anchors for the sea winde, with a small anchor out a stearn for to keep the ship right in the road, there lyeth to the eastwards of the towne a high white rock with a crosse, there is the best road. A little to the northwards of the town, is a faire sand-bay, there is good anchoring in 20, 30, or 35 fathom, according as men will lye far off, the Road is called the Rammell road. When men lie in the road of Palma, they may see the Pieck of Teneriffe lie eastsoutheast from them. The Island Palma is very high and full of trees, whereby it is easy to bee known.

On the southwest side of la Palma is another place, where men lade wines called Tassa Corda.

About 5 leagues west from the west end of Teneriffe, lieth the Island Gomera, which hath on the n. e. side a good haven of 10 fathom deep, where is good lying almost for all windes, better then in any of the other Islands, but there is nothing to lade: Men may alsoo anchor without before the haven in 20 fathom, but they must shift roads there as at Garrichica.

The road of Adessa in Teneriffe lieth right over against it, east off from it about 5 leagues.

The road of Palma lyeth from this haven in Gomera northwest and by north 16 leagues.

The Island Ferro lieth from the Island Palma south and by west, distant 13 leagues.

Of the Tydes.

On the Islands of the Canaries maketh at the most places the natural tyde, to wit, a southwest and northeast Moone the highest water.

Of the Courses of the Sunne.

From the west point of Forteventura to the Island of great Canaries east and west 19 or 20 leagues.
From the north poynt of the Canaries to Punte de Nago the northeast poynt of Teneriffe westnorth w. 21 leag.
From Punte de Nago to Garrichica westsouthwest and southwest and by west 8 or 9 leagues.
From Teneriffe to Isle de Palma w. n. w. 18 leagues.
From the west end of Teneriffe to Gomera w. 5 leagues.
From the Palma to Ferro south and by west 13 leagues.
From great Canaries to Salvages northnorthw. 40 leagues.
From Garrichica to Salvages northnortheast and north and by east 30 leagues.
From Teneriffe to the Isle de Madera north 72 leagues.
From great Canaries to the east end of Madera north and by west 85 leagues.
From la Palma to Madera north and by e. 60 leagues.
From Salvages to the Serters of Madera n. 46 leagues.
The outermost of the Serters lyeth from Madera 4 leag.
From Madera to S. Michaels n. w. 136 leagues.
From the west end of Forteventura to the C. de Bajador south and south and by west 20 leagues.
From Lancerota to the Cape S. Vincent northnortheast 180 leagues.
From great Canaries to Cales northeast 240 leagues.
From the great Canaries to C. S. Vincent, northeast and by north 210 leagues.
From great Canaries to Roxent northnortheast somewhat easterly 240 leagues.
From great Canaries to C. de Finisterre northnortheast somewhat northerly 307 leagues.
From Teneriffe to the Lizart northnortheast distant 467 leagues.
From the Palma to Cape S. Vincent n. e. 224 leagues.
From Madera to Cape de Geer eastsoutheast 128 leagues.
From Madera to Saffia east 130 leagues.
From Madera to Cales eastnortheast 200 leagues.
From Madera to Roxent northeast 178 leagues.
From Madera to the C. Finisterre northeast and by north somewhat northerly 245 leagues.

Heights.

The Island Lancerota lieth in 28 degrees. 35 minutes.
The north end of the great Canaries lieth in 28 degrees. 14 minutes.
The north end of the Teneriffe in 28 degrees. 40 minutes.
Isle de Palma in 28 degrees. 10 minutes.
Salvages in 30 degrees.
The southermost part of Madera in 32 degrees.
But the northermost in 32 degrees. 30 minutes.
Porto Santo in 33 degrees.

How theſe Lands doe ſhew themſelves at Sea.

Hil with the Mizen.



Thus ſheweth the ſouth-coaſt of Forteventura, when the hill with the white Mizen is northweſt and by north about a league from you.



Thus ſheweth the northweſt ſide of great Canaries.



Thus ſheweth Teneriffe, when the Pico is weſtſouthweſt from you, and then you are open before the Roade of Saint Cruz.



Thus ſheweth Teneriffe when the Pico is ſoutheaſt from you, and then are you open before the Roade of Garrichica.



When la Palme is about eaſt from you 16 or 17 leagues, then it ariſeth thus.



When Porto Santo is ſ. and by w. from you about 9 leagues, then it ſheweth it ſelfe thus.



Thus ſheweth the Iſland Palma being ſouth and ſouth and by eaſt nine or ten leagues from you.



Thus ſheweth the Iſland Palma being ſouthweſt & by ſouth 4 or 5 leagues from you.



When Salvages is eaſtſoutheaſt five leagues from you, it ſheweth it ſelfe thus.



When Salvages is eaſtſoutheaſt five leagues from you, it ariſeth thus.



When Porto Sancto is about ſouth, 5 or 6 leagues from you, then ſheweth it ſelfe thus.



Thus ſheweth the Iſland Madera, when you come from the northwards, & that the middeſt of the Iſland is 10 or 12 leagues from you, the ſoutheaſt end is very ragged when you are neere by it, the northweſt end is a ſteep point going ſloping downe.



Thus ſheweth the Iſland Madera being ſouthweſt from you.



When Madera is weſtſouthweſt from you 13 leagues, it ariſeth thus.



When Madera is ſouth from you 16 leagues, it ſheweth it ſelfe thus.

FINIS.